

2809-02517



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January 31, 1989

California Regional Water Quality Control Board  
1111 Jackson Street, room 6040  
Oakland, California 94607-4567

Attn: Ms. Lila Tang

Subject: Enclosed Combined Quarterly NPDES Discharge and  
Ground-Water Monitoring Report,  
Hewlett Packard Company Ground-Water Extraction  
and Treatment System, Mountain View, California

Enclosed is the combined quarterly NPDES discharge and ground-water monitoring report. The report presents a summary of operations for the ground-water extraction and treatment system at the subject facility during the period of October through December 1988, as well as ground-water monitoring data for the same period.

I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions, please call Mark Knox or John Faustini of Levine\*Fricke at (415) 652-4500, or the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read "Joyce Gee".

Joyce Gee  
Environmental Health and Safety Specialist

Enclosure

cc: Mark Knox/John Faustini - Levine\*Fricke  
Jill Slater, McLaren Environmental  
Corky Chew, Hewlett Packard  
Dave Miller, Corporate Counsel, Hewlett Packard

n/a

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**Combined  
Quarterly/Annual NPDES Monitoring Report  
Ground-Water Extraction and Treatment System  
October 1 to December 31, 1988  
1988 Annual Summary  
and  
Quarterly Ground-Water Monitoring Report  
October 1 to December 31, 1988**

February 1, 1989  
1036/1047

WDR Order No. 88-095  
NPDES No. CA 0029408  
SCR Order No. 88-122  
Hewlett Packard Software Distribution Center  
Mountain View, California

Prepared for:  
Hewlett Packard Company  
690 East Middlefield Road  
Mountain View, California



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**QUARTERLY/ANNUAL NPDES MONITORING REPORT  
GROUND-WATER EXTRACTION AND TREATMENT SYSTEM  
(WDR Order No. 88-095; NPDES No. CA 0029408)**

**AND**

**QUARTERLY GROUND-WATER MONITORING REPORT  
(SCR Order No. 88-122)**

**HEWLETT PACKARD SOFTWARE DISTRIBUTION CENTER  
MOUNTAIN VIEW, CALIFORNIA**

**1.0 SCOPE OF THIS REPORT**

This quarterly monitoring report for Hewlett Packard's Software Distribution Center at 690 East Middlefield Road in Mountain View, California consists of three parts: (1) the quarterly NPDES Monitoring Report for the on-site ground-water extraction and treatment system for the period October 1, 1988 to December 31, 1988, and (2) the annual NPDES compliance evaluation summary for the period January 1, 1988 to December 31, 1988, and (3) the quarterly ground-water monitoring report for the period October 1, 1988 to December 31, 1988. These subjects are presented as described below.

**1.1 Quarterly NPDES Monitoring Report for the Ground-Water Extraction and Treatment System**

The quarterly NPDES monitoring report for the ground-water extraction and treatment system is detailed in Section 2.0. It describes the operation and monitoring activities for the period of October 1, 1988 to December 31, 1988 and is submitted pursuant to the California Regional Water Quality Control Board's (RWQCB) Waste Discharge Requirements (WDR) Order No. 88-095 and NPDES Permit No. CA 0029408.

**1.2 Annual NPDES Monitoring Report for the Ground-Water Extraction and Treatment System**

The annual NPDES monitoring report for the ground-water extraction and treatment system is detailed in Section 3.0. It describes the operation and monitoring activities for the period of January 1, 1988 to December 31, 1988 and is submitted pursuant to the California Regional Water Quality Control Board's (RWQCB)

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Waste Discharge Requirements (WDR) Order No. 88-095 and NPDES Permit No. CA 0029408.

### **1.3    Quarterly Ground-Water Monitoring Report**

The quarterly ground-water monitoring report is detailed in Section 4.0. It presents results of ongoing ground-water level and water-quality monitoring conducted at the Hewlett Packard facility for the period of October 1, 1988 to December 31, 1988 and is submitted pursuant to Site Cleanup Requirements (SCR) Order No. 88-122.

**2.0 QUARTERLY NPDES MONITORING REPORT FOR THE GROUND-WATER EXTRACTION AND TREATMENT SYSTEM**

**2.1 Introduction**

The following section describes the operation and monitoring of the ground-water extraction/treatment system at the Hewlett Packard Software Distribution Center in Mountain View, California for the period October 1, 1988 through December 31, 1988. This report includes tabulated summaries of treatment system operating and monitoring data. These data are submitted pursuant to the California Regional Water Quality Control Board's (RWQCB) Waste Discharge Requirements (WDR) Order No. 88-095, NPDES Permit No. CA 0029408.

The report documents the following work recently completed for the remedial program:

- o periodic measurements of system flow rates and other operational data;
- o periodic sampling of the treatment system influent, air-stripper effluent, and treatment system effluent;
- o analysis of the above samples for purgeable priority pollutants using EPA Method 624, volatile halocarbons using EPA Method 601, and phenols using EPA Method 604; and total suspended solids using EPA Method 160.2;
- o field measurements of pH, temperature, and dissolved oxygen; and
- o evaluation of data generated in the above activities.

The program to monitor the operation of the extraction and treatment system includes routine sampling of the treatment system flow streams (including influent and effluent), measurement of flow rates and other operational parameters on a daily basis, and monthly measurements of ground-water levels to evaluate the effectiveness of the ground-water extraction system. Ground-water level and ground-water quality monitoring results are presented in the accompanying ground-water monitoring report.

**2.2 Treatment System Sampling and Laboratory Analyses**

During the quarterly reporting period, samples of the treatment system influent, air-stripper effluent and final effluent after the carbon vessel were collected for chemical analyses. All samples were sent via express delivery to Clayton Environmental Laboratories, of Pleasanton, California, in 40-ml VOA vials (for volatile organic analyses) and 1-liter amber bottles (for phenols

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analyses), packed in a cooler with blue ice. Samples were analyzed for organic compounds using EPA Methods 601 and 624 and for phenols using EPA Method 604 in accordance with the NPDES self-monitoring program. Copies of the laboratory certificates for these analyses are presented in Appendix A. Treatment system effluent samples for priority pollutant metals and total suspended solids were also analyzed in accordance with the NPDES requirements.

Treatment system influent is sampled from the influent flow line (Station I-1) after ground-water extraction and prior to flow into the treatment system. Results of the influent sampling analyses are summarized in Table 1.

The treatment system effluent was sampled at Station E-1 after treatment and prior to discharge into the storm drain. The results of the treatment system effluent analyses (for the same compounds as listed in Table 1) are shown in Table 2. These results indicate that analytes of the EPA methods listed above were below detection limits in effluent samples collected during the reporting period.

The receiving water station (C-1) was sampled from Stevens Creek approximately 100 feet downstream of the discharge point of an 84-inch-diameter storm drain, located approximately 150 feet upstream of the Highway 101 bridge at the Moffett Boulevard off ramp. This location is about 1-1/4 mile northwest of the Hewlett Packard site. Analysis of a sample collected from Station C-1 on December 12, 1988 detected 0.0036 parts per million (ppm) of trichloroethene (TCE), 0.0018 ppm of trans/cis-1,2-dichloroethene (trans/cis-1,2-DCE) and 0.0004 ppm of trans-1,2-dichloroethene (trans-1,2-DCE). Analysis of the effluent sample collected at Station E-1 on the same day did not detect concentrations of these compounds.

Treatment system performance data, including flow rates and pH values, were measured periodically and recorded on daily field operations sheets, copies of which are included in Appendix B. Temperature, pH, and dissolved oxygen levels were recorded in the comments section of the field sheets and are summarized in Table 3. Operational changes (e.g., pressure losses, equipment failure, etc.) for the treatment system were also recorded in the comments section.

The pH values for the system flow streams, including effluent pH, were monitored using a portable pH meter and were recorded on field operations sheets presented in Appendix B. Effluent pH readings collected during the subject quarterly reporting period indicate the system was in compliance with NPDES requirements.

Dissolved oxygen concentration was measured in the system effluent monthly and at Station C-1 on December 12, 1988. These data indicate that the dissolved oxygen concentration measured in the receiving waters during the subject reporting period consistently exceeded the NPDES permit specification of a minimum dissolved oxygen concentration of 5 mg/l for the receiving water.

### **2.3 Ground-Water Treatment System Operation**

Overall, system performance was excellent; the treatment system was 100% operational for the 92 days within this reporting period. According to flow measurements from the treatment system flow totalizer, approximately 890,700 gallons of extracted ground water were treated during the subject reporting period. This is an average flow of approximately 6.9 gallons per minute (gpm) throughout the quarter.

### **2.4 Ground-Water Extraction System Operation**

The extraction wells were operative throughout the quarterly reporting period, except as noted below. Pump control settings in these wells have been, and will continue to be, adjusted to optimize the extraction system's efficiency and overall effectiveness. Well flow data are recorded on the field log sheets included in Appendix B. Table 4 summarizes the weekly flow volumes for each extraction well, readings which were recorded from the mechanical flow meter totalizer at each well location.

The pumps in wells E-5 and E-6 were temporarily shut down from December 8, 1988 through the end of the reporting period because of a short-circuit in the electrical power supply to both wells. At well E-6, chronic clogging of the flow meter due to silt build-up in the mechanism and the failure of the extraction pump due to a build-up of silt around the motor and pump intake necessitated that the pump be replaced and the well redeveloped. The pump was removed from well E-6, and the well was redeveloped on December 11, 1988, and a new pump was ordered at that time. Repair to the electrical wiring to the two wells was completed on January 9, 1989, and a new pump was installed in well E-6 on the same day. Because of the temporary shut-down of wells E-5 and E-6, the total amount of ground water extracted by the system declined from approximately 380,000 gallons in November to approximately 106,000 gallons in December. The system was brought back to full operational capacity on January 9, 1989.

### **2.5 Compliance Evaluation Summary**

The ground-water treatment system was in compliance with all NPDES effluent and receiving water limitations throughout the quarterly period. These results demonstrate the effectiveness of the treatment system in meeting NPDES standards.

### **3.0 MONITORING REPORT ANNUAL SUMMARY**

#### **3.1 Introduction**

The following section is a discussion of annual compliance with NPDES permit requirements, summaries of the annual monitoring data, and a summary discussion of the annual operation and performance of the ground-water extraction and treatment system. This summary is submitted pursuant to the RWQCB's WDR Order No. 88-095, NPDES Permit No. CA 0029408. The time period covered in this annual summary is from June 20, 1988 (start-up) through December 31, 1988.

#### **3.2 Compliance with NPDES Permit Requirements**

An on-going program has been implemented to monitor the operations and performance of the ground-water extraction and treatment system. This program includes regular measurement and monitoring of extraction system flow rates; routine sampling, analysis, and characterization of contaminant compounds in the influent and effluent from the treatment system; and measurement of the operational parameters required from successful treatment system operations.

Annual summaries of the results of sample analyses conducted during the reporting period are presented in Tables 1, 2, and 3 of this report. Samples analyzed for the monitoring program were collected at the influent to the treatment system (I-1), after treatment and prior to discharge (E-1), and from the receiving waters at the Moffett Channel, approximately 100 feet downstream of the storm drain discharge (C-1). Samples were analyzed for organic chemicals using EPA Methods 601, 612, and 624.

Sampling and analysis at C-1 has indicated that concentrations of certain organic compounds (see Table 3) which are not present in the treated effluent are being discharged from another source(s) into the same stormwater collection system.

Treatment system pH readings and flow rates were measured and recorded on a daily basis and reported accordingly. The readings are recorded on the field operations sheets. The effluent pH was within the allowable range for discharge required by the NPDES permit.

A totalizing flow meter on the influent stream into the treatment system records the total volume of ground water being treated. The total volume treated by the treatment system from June 20, 1988 (start-up) through December 28, 1988 (the date of the last meter reading) was approximately 1,874,000 gallons. This

represents an average flow rate of approximately 6.9 gallons per minute.

Required sampling and analyses of samples collected from Station C-1 indicated dissolved oxygen concentrations to be greater than the minimum of 5.0 mg/l, as required by the NPDES permit. The results of this sampling are summarized in Table 3.

#### **4.0 QUARTERLY GROUND-WATER MONITORING REPORT**

##### **4.1 Introduction**

This portion of the report presents the results of ground-water monitoring conducted at the Hewlett Packard Software Distribution Center facility in Mountain View, California for the fourth quarter of 1988. Included are graphic and tabular presentations and discussion of water-level and water-quality data for the subject period.

Ground-water samples were collected from on- and off-site monitoring and extraction wells during the period of October 19 to 25, 1988. Samples were collected from the following wells for analysis using EPA Method 624: E-1, E-2, E-3, E-4, E-5, E-6, and from the following wells using EPA Method 8240: W-1, W-5A, W-5B, W-6, W-6B1, W-7, W-8A, W-8B1, W-8B, W-9, W-10, W-11, W-12, W-13, W-14, W-15, W-16, W-17, W-18, W-28, W-31, W-33, W-34, W-35, W-36, W-37, W-39, W-40, W-41, W-42, and W-45 (Figure 1). These wells were sampled by Levine·Fricke for Hewlett Packard as part of the on-going periodic ground-water monitoring program, as requested by the Regional Water Quality Control Board (RWQCB) in SCR Order No. 87-1 adopted on January 21, 1987 and subsequently revised in SCR Order No. 88-122 adopted July 20, 1988.

##### **4.2 Ground-Water Elevation and Flow**

The effectiveness of ground-water extraction initiated at the site on June 20, 1988 was assessed based on measurements of on- and off-site ground-water levels between June 20, July 5, July 12, July 21, August 4, and September 2, 1988, as discussed in the Levine·Fricke November 3, 1988 Quarterly Monitoring Report. These data indicated a north to northeast flow direction for shallow ground water both before and after ground-water extraction was initiated, with depressions in the ground-water surface in the vicinities of extraction wells E-1 through E-4 and wells E-5 and E-6. Water levels measured on October 19, 1988 and November 21, 1988 (Figures 2 and 3) showed a similar pattern.

The area-of-capture for the Hewlett Packard extraction system is estimated to extend approximately 75 to 100 feet north of the

northeastern site boundary, approximately 200 to 250 feet west of extraction well E-5, and 75 to 100 feet east of well E-6 (Figures 2 and 3). This indicates that the extraction system is effectively capturing ground water emanating from the portion of the HP site in which VOCs have been detected in shallow ground water, as well as capturing VOC-affected ground water at the E/M Lubricants facility, located adjacent to the northern boundary of the Hewlett Packard site (Figure 1). The series of extraction wells located south of Building 31 (E-1 to E-4), where the highest VOC concentrations in on-site ground water have been measured, are effectively capturing ground water in this suspected chemical source area and thereby reducing and retarding downgradient migration of VOCs from this area.

Wells E-5 and E-6 were shut down for maintenance on December 9 and remained down through the end of the reporting period, as discussed in Section 2.4. Ground-water levels were not measured in December; however, water levels were measured in January and will continue to be measured on a monthly basis.

#### 4.3 Ground-Water Quality

##### 4.3.1 Sampling and Analytical Procedures

Three to 10 well volumes were purged from each well prior to sampling. The wells were purged either by pumping with a centrifugal pump or with an electric submersible pump. Wells which recovered slowly were pumped dry twice, allowing the water level to recover to 80% of the static level between purgings and prior to collecting the sample. The purging and sampling equipment used for each well was steam-cleaned prior to use. Field measurements of temperature, pH, and specific conductance of the evacuated water were recorded during purging. The evacuated water was transferred to the on-site treatment system for treatment and discharge to the storm sewer.

After purging each well, a water sample was collected using a clean Teflon bailer, then placed in two 40-ml glass volatile organic analysis (VOA) vials. The sample vials were gently filled to overflowing, capped, and checked for trapped air by inverting and tapping each vial. If an air bubble was found, a new vial was filled.

Before each use, the Teflon bailer was cleaned with Alconox (a laboratory-grade detergent), steam-cleaned, and fitted with new polypropylene rope. Duplicate and field blank samples, consisting of approximately 10% of the total number of wells sampled, were collected for quality control purposes. The field blank samples were collected by pouring organic-free water into the bailer and then decanting it into 40-ml glass VOA vials prior to

lowering the bailer into the well. All samples were stored in chilled ice chests for transport to the chemical laboratories.

Extraction wells (E-1 through E-6) were sampled through sampling taps installed at each wellhead. Approximately three gallons of water was purged from each line prior to sampling, at which time two VOAs were filled directly from the tap.

CHEMWEST of Sacramento, California, was the primary laboratory and analyzed samples from each well using EPA Methods 624 (extraction well samples) and 8240 (all other samples). Quality control samples were analyzed by the Hewlett Packard Corporate Environmental Laboratory (HPCEL) following a modified EPA Method 601 protocol.

#### 4.3.2 Water-Quality Results

The October 1988 water quality analysis results are summarized in Figures 4 through 8, and Table 7; laboratory certificates are included in Appendix C. The analytical results show the same general VOC concentration pattern as previous sampling results. Trichloroethene (TCE) was the VOC detected most frequently and at the highest concentrations in on-site monitoring wells. Other VOCs detected during the October sampling include tetrachloroethene (PCE), 1,1,1-trichloroethane (TCA), 1,1-dichloroethene (1,1-DCE), 1,1-dichloroethane (1,1-DCA), cis- and/or trans-1,2-dichloroethene (1,2-DCE), 1,2-dichloroethane (1,2-DCA), and chloroform. The October 1988 sampling results were discussed in detail in the January 6, 1988 Remedial Investigation Summary Report and are summarized briefly below.

##### Trichloroethene (TCE)

The distribution of TCE in ground water at the site indicated by the October 1988 sampling results is shown in Figure 4. Significant changes in the concentrations of TCE detected in ground water relative to previous sampling results were observed in wells W-31, W-13 and W-42, as discussed below.

The concentration of TCE detected in ground water sampled from well W-31 decreased by about an order of magnitude (from 0.37 to about 0.03 ppm) between February and October, 1988. The decrease in TCE concentrations in well W-31, and a corresponding decrease in the concentrations of other VOCs previously detected in this well (TCA, PCE, 1,1-DCE, 1,1-DCA, 1,2-DCE) may be related to the start-up of the on-site ground-water extraction system in June 1988; however, the magnitude of the decrease was significant. Although analytical error was suspected, the earlier water-quality sampling results from well W-31 were confirmed by two sampling rounds (January 22 and February 11, 1988), and the Octo-

ber results were confirmed by analyses of duplicate samples by two different laboratories (Table 6). Well W-31 is scheduled to be resampled in April 1989, and those results should aid in clarifying whether the October data are anomalous or represent an actual change in water-quality conditions at this location.

TCE concentrations in this sampling round increased in well W-13 from 0.059 ppm in April 1988 to 0.5 ppm in October 1988. The TCE concentrations measured in duplicate samples for well W-13 in October were the highest yet reported, but were not inconsistent with previous sampling results; concentrations of TCE and other VOCs detected in water samples from this well have historically shown a great amount of variability (Table 6).

TCE concentrations in monitoring well W-42 also exhibited a significant increase, from 0.017 in April 1988 to 0.075 ppm in October 1988, the highest TCE concentration yet measured in any of the monitoring wells north of Maude Avenue.

#### Tetrachloroethene (PCE)

Two significant changes in the pattern of PCE concentrations were observed from the October sampling data (Figure 5). First, the PCE concentration in extraction well E-5 and nearby monitoring well W-6 increased by as much as an order of magnitude, from 0.026 and 0.037 ppm, respectively, in April 1988 to 0.29 and 1.0 ppm, respectively, in October 1988. This suggests that ground-water extraction at well E-5 is drawing in PCE-affected water from the E/M Lubricants site. Unfortunately, E/M Lubricants has not reported any recent sampling data for the three monitoring wells located on their site (EM-1, EM-2, and EM-3) which would be useful in assessing ground-water quality changes immediately downgradient (northeast) of well E-5.

Second, PCE concentrations in ground water in the area south of Building 31 increased from not detectable to 0.035 and 0.081 ppm in extraction wells E-2 and E-3, respectively, and from 0.0008 ppm to 0.033 ppm in monitoring well W-1. PCE had formerly been detected at similar concentrations in ground water in this area, but had declined to very low to non-detectable concentrations during recent sampling events.. The October data suggest that the extraction wells in this area may be drawing PCE-affected ground water from underneath Building 31, where PCE, previously detected in ground water in the vicinity of the extraction wells, would have been carried by ground-water flow under the natural (pre-pumping) hydraulic gradient.

#### 1,1-Dichloroethene (1,1-DCE) and 1,1-Dichloroethane (1,1-DCA)

The distributions of 1,1-DCE and 1,1-DCA in shallow ground water in the site vicinity indicated by the October 1988 sampling

results are shown in Figures 6 and 7, respectively. The October water samples from extraction wells E-2, E-3, E-5, and E-6 contained measurable concentrations (up to 0.077 and 0.012 ppm, respectively) of 1,1-DCE and/or 1,1-DCA. Both compounds were detected at higher concentrations (0.24 and 0.34 ppm, respectively) in the sample from monitoring well W-6. 1,1-DCA was also detected at about 0.04 ppm in two samples collected from well W-28 but was not detected in samples from any other on-site monitoring well. 1,1-DCE was detected in samples from wells W-28 and W-16 at about 0.04 and 0.02 ppm, respectively, and in samples from wells W-14 and W-17 at trace concentrations (<0.001 ppm). 1,1-DCE and/or 1,1-DCA were also detected in off-site wells W-11, W-13, W-31, W-34, W-39, W-41, W-42, and W-45 at concentrations consistent with past sampling results.

#### 1,1,1-Trichloroethane (TCA)

TCA was detected in samples from 14 wells in October 1988 (Figure 8), generally at low concentrations (less than about 0.01 ppm); higher concentrations of TCA were detected in samples from on-site wells E-5 and W-6 (0.034 and 0.12 ppm, respectively) and off-site wells W-28, W-39, and W-42 (0.040, 0.052, and 0.025 ppm, respectively). Wells in which TCA was detected were W-1, W-5A, W-6, W-7, W-17, W-28, W-31, W-33, W-39, W-39, E-1, E-3, E-5, and E-6 (Figure 8).

#### 1,2-Dichloroethene

Cis- and/or trans-1,2-dichloroethene (1,2-DCE) was detected in 12 of the wells sampled in October (Figure 8). Wells in which 1,2-DCE was detected include W-6, W-7, W-17, W-28, W-31, W-33, W-34, W-41, W-41, E-2, E-3, and E-4. The highest concentration of 1,2-DCE detected in the October 1988 sampling event was 0.31 ppm in the sample from extraction well E-4, which has consistently exhibited 1,2-DCE concentrations of several tenths of a ppm in previous sampling results. Concentrations of 1,2-DCE detected in the ground-water samples collected from the remaining wells in October 1988 ranged from 0.003 to 0.025 ppm and were consistent with historical measurements.

#### **4.3.3 QA/QC Results**

Duplicates obtained from wells W-13, W-14, W-17, W-28, and W-31 were submitted to HPCEL for analysis as a QA/QC check on the primary laboratory (CHEMWEST). Data precision of analytical results for duplicate samples is assessed by the relative percent difference (RPD) parameter, which is defined as the absolute value of the difference between two values divided by their arithmetic mean. Upper warning and upper control limits (UWL and UCL), which indicate questionable and unacceptable data quality, respectively, were set in the March 28, 1988 revised Quality

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Assurance Project Plan at 50 and 100 percent, except for values which are close to the reporting limit, where greater variability in analytical results is normally encountered. RPD values for analyses of duplicate samples indicate good data precision collected in the October-November sampling round are shown in Table 7. None of the RPD values for the October-November analytical data exceed the UCL or the UWL.

Field (bailer) blank samples were collected prior to sampling wells W-6B1, W-8B1, W-8A, and W-40 during the October 1988 sampling round as a QA check on field decontamination procedures; these samples were submitted to CHEMWEST for analysis using EPA Method 8240. VOCs were not detected by CHEMWEST in the bailer blank samples.

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CERTIFICATION

All hydrogeologic and geologic information, conclusions, and recommendations in this report have been prepared and reviewed by a Levine·Fricke California Registered Geologist. All engineering information, conclusions, and recommendations have been prepared or reviewed by a Levine·Fricke Professional Engineer.



Thomas M. Johnson  
Principal Hydrogeologist  
California Registered Geologist (4268)



Mark D. Knox  
Principal Engineer  
Professional Engineer (33194)

TABLE 1

**SUMMARY OF INFLUENT CONCENTRATIONS (PPM) FOR ORGANIC COMPOUNDS  
GROUND-WATER TREATMENT SYSTEM  
HEWLETT PACKARD FACILITY, MOUNTAIN VIEW, CALIFORNIA  
LF 1047**

Sample Date	Influent Concentrations (ppm)										Penta-chlorophenol
	1,1-DCE	1,1-DCA	1,2-DCE	1,1,1-TCA	TCE	PCE	Freon 113	Chloroform	Bromoform	Vinyl Chloride	
06/20/88	0.0021	0.0031	0.0073	0.0019	0.200	0.012	<0.001	<0.001	<0.001	<0.001	--
06/21/88	0.0026	0.0045	0.0067	0.0018	0.190	0.012	<0.001	<0.001	<0.001	<0.001	--
06/22/88	0.0027	0.0055	0.0062	0.0017	0.180	0.011	<0.001	<0.001	<0.001	<0.001	--
06/29/88	0.0052	0.011	0.007	<0.0005	0.240	0.020	<0.001	<0.001	<0.001	<0.001	<0.010
07/05/88	0.0058	0.012	0.0072	0.0045	0.280	0.016	0.0007	<0.001	<0.001	<0.001	--
07/13/88	0.018	0.040	0.020	0.0100	0.500	0.032	0.0013	<0.001	<0.001	<0.001	--
08/16/88	0.023	0.051	0.010	0.012	0.240	0.082	<0.001	<0.001	<0.001	<0.001	--
08/24/88	0.033	0.051	0.0097	0.011	0.079	0.053	<0.001	<0.001	<0.001	<0.001	--
09/02/88	0.012	0.037	0.0086	0.0061	0.200	0.060	<0.001	<0.001	<0.001	<0.001	--
09/12/88	0.017	0.039	0.014	0.0074	0.310	0.068	<0.001	<0.001	<0.001	<0.001	--
09/16/88	--	--	--	--	--	--	--	--	--	--	<0.020
09/22/88	0.026	0.034	0.013	0.0064	0.500	0.074	<0.001	<0.001	<0.001	<0.001	--
Current Quarter Summary											
Average Conc.	0.039	0.0578	0.012	0.0188	0.338	0.122	<0.002	<0.002	<0.003	<0.002	<0.001
Maximum	0.054	0.110	0.023	0.039	0.860	0.250	<0.003	<0.003	<0.004	<0.003	<0.001
Minimum	<0.001	<0.002	0.0043	<0.002	0.110	<0.002	<0.0006	<0.0007	<0.0005	<0.0005	<0.0006

TABLE 1

SUMMARY OF INFLUENT CONCENTRATIONS (PPM) FOR ORGANIC COMPOUNDS  
 GROUND-WATER TREATMENT SYSTEM  
 HEWLETT PACKARD FACILITY, MOUNTAIN VIEW, CALIFORNIA  
 LF 1047

Sample Date	Influent Concentrations (ppm)						Vinyl Chloride	1,1,2-TCA	Penta-chlorophenol	
	1,1-DCE	1,1-DCA	1,2-DCE	1,1,1-TCA	TCE	PCE	Freon 113	Chloroform	Bromoform	
Average Conc.	0.0211	0.0351	0.0100	0.0095	0.2749	0.0648	0.0001	<0.0012	<0.001	<0.010
Maximum	0.094	0.110	0.023	0.039	0.860	0.250	0.0013	<0.003	<0.003	<0.020
Minimum	<0.001	<0.002	0.0043	0.0017	0.110	<0.002	<0.0006	<0.0005	<0.0007	<0.0006

## NOTES:

Samples were collected at Station I-1 prior to ground-water treatment.  
 Influent samples were analyzed using EPA Methods 604 and 601.

TABLE 2

SUMMARY OF EFFLUENT CONCENTRATIONS (PPM) FOR ORGANIC COMPOUNDS  
 GROUND-WATER TREATMENT SYSTEM  
 HEWLETT PACKARD FACILITY, MOUNTAIN VIEW, CALIFORNIA

LF 1047

Sample Date	Effluent Concentrations (ppm)										Penta-chlorophenol
	1,1-DCE	1,1-DCA	1,2-DCE	1,1,1-TCA	TCE	PCE	Freon 113	Chloroform	Bromoform	Vinyl Chloride	
06/20/88	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
06/21/88	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
06/29/88	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
07/05/88	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
07/13/88	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
07/21/88	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
07/28/88	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
08/01/88	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.5000
08/10/88	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
08/16/88	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
08/24/88	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
09/02/88	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
09/12/88*	<0.003	<0.003	<0.003	<0.003	<0.004	<0.004	<0.004	<0.003	<0.003	<0.006	<0.006
09/16/88	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0200
09/22/88	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
10/07/88	<0.0002	<0.0004	<0.0004	<0.0005	<0.0003	<0.0005	<0.0006	<0.0005	<0.0007	<0.0005	<0.0006
10/24/88	<0.0002	<0.0004	<0.0004	<0.0005	<0.0003	<0.0005	<0.0006	<0.0005	<0.0007	<0.0005	<0.0006
11/10/88	<0.0002	<0.0004	<0.0004	<0.0005	<0.0003	<0.0005	<0.0006	<0.0005	<0.0007	<0.0005	<0.0006
11/17/88	<0.0002	<0.0004	<0.0004	<0.0005	<0.0003	<0.0005	<0.0006	<0.0005	<0.0007	<0.0005	<0.0006
12/12/88	<0.0002	<0.0004	<0.0004	<0.0005	<0.0003	<0.0005	<0.0006	<0.0005	<0.0007	<0.0005	<0.0006
12/27/88	<0.0002	<0.0004	<0.0004	<0.0005	<0.0003	<0.0005	<0.0006	<0.0005	<0.0007	<0.0005	<0.0006
Average Conc.	<0.0002	<0.0004	<0.0004	<0.0005	<0.0003	<0.0005	<0.0006	<0.0005	<0.0007	<0.0005	<0.0006
Maximum	<0.0002	<0.0004	<0.0004	<0.0005	<0.0003	<0.0005	<0.0006	<0.0005	<0.0007	<0.0005	<0.001
Minimum	<0.0002	<0.0004	<0.0004	<0.0005	<0.0003	<0.0005	<0.0006	<0.0005	<0.0007	<0.0005	<0.0006

TABLE 2

SUMMARY OF EFFLUENT CONCENTRATIONS (PPM) FOR ORGANIC COMPOUNDS  
 GROUND-WATER TREATMENT SYSTEM  
 HEWLETT PACKARD FACILITY, MOUNTAIN VIEW, CALIFORNIA  
 LF 1047

Sample Date	Effluent Concentrations (ppm)							
	1,1-DCE	1,1-DCA	1,2-DCE	1,1,1-TCA	TCE	PCE	Freon 113	Chloroform
Average Conc.	<0.0002	<0.0004	<0.0005	<0.0003	<0.0005	<0.0006	<0.0007	<0.0005
Maximum	<0.003	<0.003	<0.003	<0.004	<0.004	<0.003	<0.003	<0.004
Minimum	<0.0002	<0.0004	<0.0004	<0.0005	<0.0003	<0.0005	<0.0007	<0.0005

## NOTES:

Samples were collected at Station E-1 following ground-water treatment.

Effluent samples were analyzed using EPA Methods 604 and 601.

\* Sample collected 09/12/88 was analyzed using EPA Method 624.

TABLE 3  
 NPDES MONITORING RESULTS  
 PHYSICAL AND INORGANIC PARAMETERS  
 GROUND-WATER TREATMENT SYSTEM  
 HEWLETT PACKARD FACILITY, MOUNTAIN VIEW, CALIFORNIA  
 LF 1047

Month	Sample Station	Sample Variable and Station					Water Analyses
		Dissolved Oxygen (mg/l)	Temperature (deg. C)	pH	TSS (mg/l)		
June 1988	E-1	4.0	28	7.31	5	(1)	
	C-1	8.0	23.2	7.86	--	(2)	
September 1988	E-1	7.0	21.5	7.11	20	(1)	
	C-1	8.0	19.7	--	--	(3)	
October 1988	E-1	7.0	Current Quarter		6.6	*	(1)
			24				
November 1988	E-1	7.0	16	7.2	*	(1)	
December 1988	E-1	5.0	8	6.8	19	(1)	
	C-1	8.0	14	7.6	*	(3)	

The treatment system began full-time operation on June 20, 1988.

Station E-1 receives water after the treatment system and prior to discharge into storm drain.

(1) - See Table 2.

(2) - Station C-1 was sampled at a manhole downstream of the discharge on Logue Avenue.

(3) - Station C-1 was sampled from Stevens Creek approximately 100 feet downstream of the storm drainage discharge point, approximately 500 feet west of the interchange of Hwy. 101 and Moffett Blvd.

All compounds were below detection limits except for the following:

Trans-1,2-DCE 0.004 ppm

Trans/cis-1,2-DCE 0.0018 ppm

TCE 0.0036 ppm

\* Sample not required

TABLE 4

WELL FLOW VOLUME SUMMARY  
GROUND-WATER EXTRACTION AND TREATMENT SYSTEM  
HEWLETT PACKARD FACILITY, MOUNTAIN VIEW, CALIFORNIA  
LF 1047

Volume of Ground Water Extracted (Gallons)									
Date of Meter Reading	No. of Days in Period	Well Number					Extraction Well Total		
		E-1	E-2	E-3	E-4	E-5	E-6*	Total	
Prior Quarter									
20-Jun-88									
22-Jun-88	2	2,510	2,420	1,330	1,890	0	10,630	18,780	
05-Jul-88	13	10	6,300	1,800	2,650	32,890	8,080	51,730	
20-Jul-88	15	7,470	6,410	1,950	4,820	185,850	23,320	229,820	
27-Jul-88	7	2,340	2,770	700	2,380	59,760	0	67,950	
03-Aug-88	7	490	3,160	780	2,200	56,940	0	63,570	
12-Aug-88	9	4,430	3,810	960	2,710	74,580	7,450	93,940	
19-Aug-88	7	5,020	2,600	710	2,060	64,180	0	74,570	
24-Aug-88	5	3,110	1,660	470	1,460	44,600	0	51,300	
30-Aug-88	6	3,580	1,900	580	1,690	48,910	0	56,660	
08-Sep-88	9	5,210	2,590	820	2,520	58,430	0	69,570	
16-Sep-88	8	4,470	2,150	720	2,140	35,410	0	44,890	
22-Sep-88	6	3,360	1,560	530	1,580	23,450	0	30,480	
30-Sep-88	8	4,540	2,050	690	2,110	30,550	0	39,940	
Prior Quarter Summary									
Total:	102	46,540	39,380	12,040	30,210	715,550	49,480	893,200	
Average (gpm):		0.32	0.27	0.08	0.21	4.87	0.34	6.08	
Current Quarter									
07-Oct-88	7	3,970	1,730	590	1,810	NR	NP	32,000	
11-Oct-88	4	2,320	1,100	350	1,040	53,980	NR	32,750	
19-Oct-88	8	4,700	1,840	650	2,050	124,760	13,910	147,910	
25-Oct-88	6	3,450	1,230	470	920	84,960	9,000	100,030	
01-Nov-88	7	4,010	1,170	520	940	94,640	8,580	109,860	
10-Nov-88	9	5,150	1,390	380	1,080	110,130	NR	118,130	
17-Nov-88	7	3,960	990	810	410	93,020	2,900	102,090	
23-Nov-88	6	3,310	830	400	NR	59,490	NR	64,030	
09-Dec-88	16	7,900	2,020	1,110	2,080	152,380	2,500	167,990	
13-Dec-88	4	660	470	290	850	NP	NP	2,270	
23-Dec-88	10	5,620	1,160	670	2,120	NP	NP	9,570	
28-Dec-88	5	2,390	490	290	900	NP	NP	4,070	
Current Quarter Summary									
Total	89	47,440	14,420	6,530	14,200	773,360	36,890	890,700	
Average (gpm)		0.32	0.10	0.04	0.10	7.67	0.58	6.95	

## NOTES:

\* - Flow rate was estimated due to meter malfunction.  
NR - No reading available  
NP - Not pumping (Non-pumping periods not included in averages)

TABLE 5  
DEPTHS TO AND ELEVATIONS OF  
GROUND WATER IN WELLS

Date:		19 OCT 1988		21 NOV 1988	
Well Number	Well Elevation (feet)	Depth to Water (feet)	Ground-Water Elevation (feet)	Depth to Water (feet)	Ground-Water Elevation (feet)
W1	60.88	23.61	37.27	23.90	36.98
W2A	59.70	21.70	38.00	21.97	37.73
W2B	59.64	22.34	37.30	22.65	36.99
W3	58.52	22.78	35.74	23.07	35.45
W5A	60.87	23.05	37.82	23.35	37.52
W5B	61.34	24.13	37.21	24.43	36.91
W6	57.13	23.99	33.14	23.84	33.29
W6B1	57.30	21.54	35.76	21.82	35.48
W7	58.46	22.76	35.70	23.06	35.40
W8A	59.53	22.61	36.92	23.05	36.48
W8B1	59.21	22.72	36.49	23.03	36.18
W8B	59.34	22.97	36.37	23.27	36.07
W9	64.91	26.46	38.45	26.79	38.12
W10	64.48	26.35	38.13	26.64	37.84
W11	52.15	17.76	34.39	17.96	34.19
W12	51.65	16.93	34.72	17.39	34.26
W13	50.94	16.27	34.67	16.64	34.30
W14	59.42	23.52	35.90	23.97	35.45
W15	59.00	23.99	35.01	24.30	34.70
W16	59.60	25.08	34.52	25.14	34.46
W17	58.14	22.57	35.57	22.80	35.34
W18	60.82	24.59	36.23	24.85	35.97
W24	61.50	24.25	37.25	24.53	36.97
W25	60.35	24.97	35.38	24.40	35.95
W26	61.42	26.33	35.09	26.47	34.95
W27	57.45	23.53	33.92	23.58	33.87
W28	56.90	22.63	34.27	22.73	34.17
W29	59.90	23.56	36.34	23.77	36.13
W30	60.25	24.14	36.11	24.20	36.05
W31	53.67	18.84	34.83	19.09	34.58
W33	54.34	18.87	35.47	19.16	35.18
W34	53.76	19.10	34.66	19.43	34.33
W35	53.22	17.99	35.23	18.26	34.96
W36	52.67	18.25	34.42	18.46	34.21
W37	52.07	16.90	35.17	17.22	34.85
W39	47.62	14.00	33.62	14.35	33.27
W40	51.90	17.77	34.13	18.10	33.80
W41	47.05	14.01	33.04	14.34	32.71
W42	46.19	14.12	32.07	14.45	31.74
W45	54.87	19.55	35.32	19.76	35.11
HW1	49.01	*	*	*	*
HW2	47.05	*	*	13.67	33.38
HW3	47.85	*	*	*	*

\* - Not measured; unable to access well.

TABLE 6  
Historical Water-Quality Data Summary:  
Volatile Organic Compounds  
Hewlett Packard Software Distribution Center  
(All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	1,1,1-TCA	TCE	Methylene Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
W1 (AEC-1)	16-Jun-83 27-Dec-83	624 <0.0038	0.059 <0.0028	---	1.030 <0.006	<0.0256 <0.0016	---	---	---	---	---	---	---	VicI 0.0128
26-Jan-84 17-Apr-84	LLE-GC & DAI	---	0.0087 <0.005	0.115 <0.010	---	---	---	---	---	---	---	---	---	---
28-Jun-84	LLE-GC	<0.010	<0.005	---	0.013	---	---	---	---	0.140	---	---	---	1,1,2-TCA 0.021
30-Oct-84	LLE-GC & DAI	<0.0038 0.004	0.0082 0.078	<0.0028 0.180	<0.006 ---	<0.0016 ---	<0.0028 ---	<0.0028 ---	<0.0016 ---	---	---	---	---	---
20-Feb-85 duplicate	601 601	0.0031 0.0031	0.050 0.048	---	0.140 0.140	---	<0.001 <0.001	<0.0013 <0.001	<0.001 <0.001	<0.001 <0.001	0.0055 0.0032	---	---	---
04-Jun-85	601	0.002	0.005	<0.005	0.017	---	<0.0005 <0.005	<0.0005 <0.005	<0.0005 <0.005	<0.001 <0.005	0.001 0.005	---	0.001 ---	---
19-Aug-85	624	<0.005	0.005	<0.005	0.020	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	---	---
19-Aug-85	625	---	---	---	---	---	---	---	---	---	0.010	---	---	---
19-Aug-85	601	0.001	0.013	---	0.057	---	<0.0005 <0.0005	<0.0005 <0.0005	<0.001 0.001	<0.0005 0.0005	0.001 0.001	---	0.001 0.001	0.001 0.001
23-Aug-85	625	---	---	---	---	---	---	---	---	---	0.010	---	---	---
04-Dec-85	601	0.0012	0.019	<0.005	0.079	---	<0.0005 <0.0005	<0.0005 <0.0005	<0.0005 0.0005	<0.0005 0.0005	0.001 0.001	---	0.001 0.001	---
04-Dec-85	601	0.0092	0.0002	0.0012	<0.0001	---	0.0002 <0.0005	<0.0001 <0.0005	<0.0001 <0.0005	<0.0001 <0.0005	0.0001 0.0005	---	0.0015 0.0005	0.0015 0.0005
06-Mar-86	601	0.001	0.004	<0.005	0.011	---	<0.0005 <0.0005	<0.0005 <0.0005	<0.0005 <0.0005	<0.0005 <0.0005	<0.0001 0.0005	---	0.0015 0.0005	0.0015 0.0005
06-Mar-86	601	0.002	0.002	<0.0005	0.005	---	<0.0005 <0.0005	<0.0005 <0.0005	<0.0005 <0.0005	<0.0005 <0.0005	<0.0005 0.0005	---	0.0022 0.0005	0.0022 0.0005
03-Jun-86	601	0.0008	0.006	<0.005	0.017	---	<0.0005 <0.0005	<0.0005 <0.0005	<0.0005 0.0005	<0.0005 0.0005	<0.0001 0.0005	---	0.0017 0.0007	0.0017 0.0007
14-Oct-86	601	0.0086++	0.0012	<0.005	0.021	---	<0.0005 <0.0005	<0.0009 <0.0005	<0.0006 0.0005	<0.0005 0.0005	<0.0005 0.0005	---	0.0005 0.0005	0.0005 0.0005
14-Oct-86	601	<0.0005	<0.0005	0.001	---	---	<0.0005 0.0005	<0.0005 0.0005	<0.0005 0.0005	<0.0005 0.0005	<0.0005 0.0005	---	0.0007 0.0005	0.0007 0.0005
16-Jan-87	601	<0.0005	<0.0005	0.009	---	---	<0.0005 0.0008	<0.0005 0.0005	<0.0005 0.0005	<0.0005 0.0005	<0.0005 0.0005	---	0.0005 0.0005	0.0005 0.0005
23-Apr-87	601	<0.0005	<0.0005	0.005	---	---	<0.0005 0.0005	<0.0005 0.0005	<0.0005 0.0005	<0.0005 0.0005	<0.0005 0.0005	---	0.0001 0.0001	0.0001 0.0001

TABLE 6  
Historical Water-Quality Data Summary:  
Volatile Organic Compounds  
Hewlett Packard Software Distribution Center  
(All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	Methylene	Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
			1,1,1-TCA	TCE									
	20-Aug-87	601	0.0009	0.0015	<0.005	0.0031	---	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	21-Oct-87	601	0.0009	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	21-Oct-87	601	0.0011	0.0024	<0.007	0.0007	---	<0.0005	<0.0002	0.0004	<0.0004	---	0.0007
	25-Oct-88	8240	<0.005	0.006	<0.010	0.033	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
W2A	26-Jan-84	LLE-GC	---	<0.005	---	<0.010	---	---	---	---	---	---	---
	30-Oct-84	LLE-GC & DAI	<0.0005	<0.0005	---	<0.0005	---	---	---	---	---	---	---
W2B	19-Feb-85	601	<0.0005	<0.0005	---	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005
	04-Jun-85	601	<0.0005	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	15-Aug-85	601	<0.001	<0.001	<0.005	<0.001	---	<0.001	<0.001	<0.001	<0.001	---	<0.001
	15-Aug-85	601&602	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005
	02-Dec-85	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005
	02-Dec-85	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005
	26-Jan-84	LLE-GC	---	<0.005	---	<0.010	---	---	---	---	---	---	---
	30-Oct-84	LLE-GC & DAI	0.016	<0.0005	---	<0.0005	---	---	---	---	---	---	---
W3	19-Feb-85	601	0.014	<0.0005	---	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005
	04-Jun-85	601	0.008	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.001	---	<0.001
	15-Aug-85	601	0.001	<0.001	<0.005	<0.001	---	<0.001	<0.001	<0.001	<0.001	---	<0.001
	15-Aug-85	601&602	0.023	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005
	05-Dec-85	601	0.012	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005
	05-Dec-85	601	0.017	<0.0001	<0.0001	<0.0001	---	<0.0001	0.003	<0.0001	<0.0001	---	---
	26-Jan-84	LLE-GC	---	<0.005	---	<0.010	---	---	---	---	---	---	---

TABLE 6  
 Historical Water-Quality Data Summary:  
 Volatile Organic Compounds  
 Hewlett Packard Software Distribution Center  
 (All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	1,1,1-TCA	TCE	Methylene Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
30-Oct-84	LLE-GC & DAI	<0.0005*	<0.0005*	---	<0.0005*	---	---	---	---	---	---	---	---	---
19-Feb-85	601	<0.0005	<0.0005	---	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	---
30-May-85	601	<0.0005	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	---
19-Aug-85	612	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
19-Aug-85	601&602	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
04-Dec-85	601	0.0006	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
W4A	17-Apr-84	LLE-GC & DAI	---	0.016	---	<0.010	---	---	---	---	---	---	---	---
28-Jun-84	LLE-GC	<0.010*	0.010/<0.005	---	<0.010*	---	---	---	---	---	ND/0.003	---	---	1,1,2-TCA 0.013
30-Oct-84	LLE-GC & DAI	<0.0005	0.019	---	<0.0005	---	---	---	---	---	---	---	---	---
20-Feb-85	601	<0.0005	0.012	---	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	0.0042	---	0.0008	---
03-Jun-85	601	0.001	0.032	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	0.012	---	<0.001	---
19-Aug-85	624	<0.005	0.046	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.017	---	---	---
19-Aug-85	601&602	0.0006	0.100	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.033	---	0.0039	---
05-Dec-85	601	<0.005	0.300	<0.050	<0.005	---	<0.005	<0.005	<0.005	<0.005	0.088	---	<0.005	---
W4B	17-Apr-84	LLE-GC & DAI	---	<0.005	---	<0.010	---	---	---	---	---	---	---	---
30-Oct-84	LLE-GC & DAI	<0.0005	<0.0005	---	<0.0005	---	---	---	---	---	---	---	---	---
20-Feb-85	601	<0.0005	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001
03-Jun-85	601	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001

TABLE 6  
Historical Water-Quality Data Summary:  
Volatile Organic Compounds  
Hewlett Packard Software Distribution Center  
(All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	Methylene Chloride						Other Compounds		
			1,1,1-TCA	TCE	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP
19-Aug-85	624	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
19-Aug-85	601&602	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
05-Dec-85	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
WSA	15-Aug-85	624	TR	0.720	<0.005	TR	TR	<0.005	TR	TR	---
	15-Aug-85	624	0.002	0.740	<0.005	0.001	0.003	<0.005	0.003	0.003	---
	03-Oct-85	601	<0.001	0.035	<0.005	<0.001	---	<0.001	<0.001	<0.001	<0.001
	03-Oct-85	601	0.0006	0.097	0.0015	<0.005	---	<0.005	<0.005	<0.005	---
	03-Dec-85	601&602	<0.001	0.032	<0.010	<0.001	<0.01	<0.001	<0.010	<0.010	<0.001
	03-Dec-85	Duplicate	0.0088	0.500	<0.010	<0.001	<0.01	<0.001	0.0068	<0.010	<0.010
	03-Dec-85	624	<0.001	0.063	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002
	05-Dec-85	601&602	<0.0005	0.030	0.038	<0.0005	0.0006	<0.0005	<0.0005	<0.0005	<0.0005
	07-Mar-86	624	<0.005	0.350	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
	07-Mar-86	625	---	---	---	---	---	---	---	---	---
	07-Mar-86	624	<0.005	0.385	0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	07-Mar-86	625	---	---	---	---	---	---	---	---	---
	07-Mar-86	601	<0.0025	0.400	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
	06-Jun-86	601	<0.005	0.270	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	03-Jun-86	601	<0.0005	0.280	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0065
	13-Oct-86	601	<0.0005	0.034	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005
	15-Jan-87	601	0.0006	0.024	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	---
	15-Jan-87	601	<0.0005	0.022	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005
	15-Jan-87	601	0.0013	0.028	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	0.0032
	15-Jan-87	601	0.0009	0.026	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	0.001
	22-Apr-87	601	<0.005	0.320	<0.005	---	<0.005	<0.005	<0.005	<0.005	<0.001
	22-Apr-87	601	<0.050	0.270	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	---

TABLE 6  
Historical Water-Quality Data Summary:  
Volatile Organic Compounds  
Hewlett Packard Software Distribution Center  
(All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	1,1,1-TCA	TCE	Methylene Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
19-Aug-87	601	0.0045	0.011	<0.005	<0.005	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	<0.001	
13-Oct-87	601	0.0046	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	0.0032	---	<0.001	
13-Oct-87	601	0.0054	0.0065	<0.0014	<0.0005	---	<0.0005	<0.0002	<0.0004	<0.0004	---	---	<0.0006	
13-Oct-87	610	0.005	0.003	<0.001	<0.001	---	<0.001	<0.001	<0.001	<0.001	---	---	---	
25-Apr-88	601	0.011	0.029	<0.020	<0.002	---	<0.002	<0.002	<0.002	<0.002	---	---	<0.004	
25-Apr-88	604	---	---	---	---	---	---	---	---	---	---	0.010	---	
13-Jul-88	601	0.0084	0.038	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001	NO COMPOUND DETECTED	
26-Oct-88	8240	0.011	0.011	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	---	
W5B	15-Aug-85	624	<0.005	<0.005	<0.005	<0.005	<0.005	0.009	<0.005	<0.005	<0.005	---	---	---
15-Aug-85	624	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.038	<0.005	<0.005	<0.005	---	---	---
03-Dec-85	601&602	<0.001	<0.010	<0.001	<0.001	<0.001	<0.001	0.033	<0.001	<0.001	<0.001	0.010	---	<0.001
03-Dec-85	624/625	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.048	<0.001	<0.001	<0.001	0.001	0.540	---
05-Dec-85	601&602	<0.0005	<0.0005	0.030	<0.0005	0.001	0.001	0.040	<0.0005	<0.0005	<0.0005	0.005	---	<0.0005
07-Mar-86	624	<0.005	<0.005	0.046	<0.005	<0.005	<0.005	0.007	<0.005	<0.005	<0.005	0.005	---	---
07-Mar-86	625	---	---	---	---	---	---	---	---	---	---	---	0.420	---
07-Mar-86	601	0.004	0.001	0.016	<0.0005	---	0.002	0.001	<0.0005	0.001	---	0.0005	---	---
06-Jun-86	601	0.0024	<0.0005	0.026	<0.0005	---	0.0041	<0.0005	<0.0005	<0.0005	---	<0.0005	---	---
06-Jun-86	604	---	---	---	---	---	---	---	---	---	---	---	0.580	---
06-Jun-86	601	<0.00003	<0.00006	<0.00002	<0.00003	---	<0.00005	<0.00007	<0.00005	<0.00009	0.580	---	---	---
13-Oct-86	601	0.0011	<0.0005	0.018++	<0.0005	---	0.0016	<0.0005	<0.0005	<0.0005	---	0.0005	---	---
13-Oct-86	601	0.0012	<0.0002	<0.0002	<0.0002	---	0.0018	<0.0002	<0.0002	0.0004	---	---	---	---
15-Jan-87	601	<0.0005	0.011	<0.005	<0.005	---	<0.0005	<0.0005	<0.0005	<0.0005	---	0.0005	---	---
22-Apr-87	601	0.0040	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	0.0020	---	<0.001	---	---
19-Aug-87	601	0.0062	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	0.0005	---	<0.001	---	---
13-Oct-87	601	<0.0005	0.370B	<0.005	0.015	---	0.0005B	<0.0005	0.0013	0.0013	---	<0.001	---	---

**TABLE 6**  
**Historical Water-Quality Data Summary:**  
**Volatile Organic Compounds**  
**Hewlett Packard Software Distribution Center**  
**(All results expressed in ppm)**

Well or Sample No.	Date	Type of Analysis	1,1,1-TCA	TCE	Chloride	Methylene PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
13-Oct-87	601	0.0047	<0.0003	<0.0014	<0.0005	---	<0.0005	<0.0002	<0.0004	0.0035	---	<0.0006	---	---
13-Oct-87	601	0.0047	<0.001	<0.001	<0.001	---	<0.001	<0.001	<0.001	0.003	---	---	---	---
25-Apr-88	601	0.003	0.0007	<0.005	<0.0005	---	0.0042	<0.0005	<0.0005	0.0006	---	<0.001	---	---
25-Apr-88	604	---	---	---	---	---	---	---	---	---	<0.010	---	NO COMPOUND DETECTED	---
24-Oct-88	8240	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	---
W6	16-Aug-85	624	0.021	0.076	<0.005	0.15	TR	TR	0.027	0.039	TR	---	---	---
	16-Aug-85	624	0.021	0.054	<0.005	0.140	<0.005	<0.005	0.029	0.040	0.002	---	---	---
05-Dec-85	601	0.0053	0.072	<0.050	0.11	---	<0.005	0.015	0.010	<0.005	---	<0.0005	CCl4 0.0033	---
05-Dec-85	601	0.019	0.140	<0.0005	0.14	---	0.001	0.018	0.012	0.003	---	0.0032	---	---
07-Mar-86	601	0.023	0.091	<0.050	0.140	---	<0.005	0.021	0.017	<0.005	---	<0.005	---	---
07-Mar-86	601	0.028	0.068	<0.0005	0.160	---	0.001	0.019	0.013	0.003	---	<0.0005	---	---
06-Jun-86	601	0.0089	0.100	<0.020	0.081	---	<0.002	0.011	0.0063	<0.002	---	<0.002	---	---
06-Jun-86	601/604	<0.00003	<0.00006	<0.00002	<0.00003	---	<0.00005	<0.00007	<0.00005	<0.00009	<0.002	---	---	---
14-Oct-86	601	0.0085	0.091	<0.020	0.065	---	<0.002	0.014	0.0059	<0.002	---	<0.002	---	---
14-Oct-86	601	0.0049	0.057	<0.020	0.160	---	<0.002	<0.002	<0.002	<0.002	---	---	---	---
16-Jan-87	601	0.013	0.080	<0.002	0.060	---	0.0011	0.0144	0.0088	0.0014	---	---	1,1,2,2-PCA 0.039	---
16-Jan-87	601	0.015	0.042	<0.005	0.027	---	0.0011	0.019	0.0091	0.0013	---	<0.0005	---	---
23-Apr-87	601	0.005	0.084	<0.02	0.046	---	<0.002	0.010	0.009	<0.002	---	<0.004	---	---
24-Apr-87	601	0.0043	0.056	<0.0014	0.044	---	<0.00049	0.0048	0.0047	0.00092	---	<0.0006	---	---
16-Jul-87	601	0.0065	0.110	<0.0014	0.100	---	0.0007	<0.0002	0.0058	<0.0004	---	<0.0006	---	---
18-Aug-87	601	0.0067	0.094	<0.005	0.051	---	0.001	0.0083	0.0055	0.0014	---	<0.001	---	---
16-Oct-87	601	0.0049	0.086	<0.020	0.056	---	<0.002	0.0078	0.0063	<0.002	---	<0.004	---	---
16-Oct-87	601	0.0059	0.150	<0.007	0.092	---	<0.0005	0.0068	<0.0004	<0.0004	---	<0.0006	---	---
19-Apr-88	601	0.0051	0.087	<0.025	0.037	---	<0.0025	0.0065	0.0039	<0.0025	---	<0.005	---	---
24-Oct-88	8240	0.120	<0.010	1.0	<0.005	<0.005	0.240	0.340	0.0062	0.0062	---	---	---	---

**TABLE 6**  
**Historical Water-Quality Data Summary:**  
**Volatile Organic Compounds**  
**Hewlett Packard Software Distribution Center**  
**(All results expressed in ppm)**

Well or Sample No.	Date	Type of Analysis	Methylene	Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
			1,1,1-TCA	TCE									
W681	18-Jun-86	624	<0.005	<0.005	<0.005	<0.005	<0.005	0.022	<0.005	<0.005	<0.005	<0.000	---
	18-Jun-86	601	0.0049	<0.0005	0.0021	<0.0005	---	0.023	0.0006	<0.0005	0.0007	---	<0.0005
	22-Aug-86	624	<0.005	<0.005	<0.005	<0.005	0.013	TR	<0.005	<0.005	<0.005	<0.000	---
	22-Aug-86	601	0.0038	<0.0005	<0.0005	<0.0005	---	0.0036	<0.0005	<0.0005	<0.0005	<0.000	0.0006
	13-Nov-86	601	0.0015	<0.0005	<0.0005	<0.0005	---	0.0028	<0.0005	<0.0005	<0.0005	<0.000	<0.0005
	13-Nov-86	601	<0.0002	<0.0002	<0.0002	<0.0002	---	0.0026	<0.0002	<0.0002	<0.0002	<0.000	---
	23-Apr-87	601	0.0010	<0.005	0.0010	<0.005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.000	<0.001
	26-Jan-88	601	0.0039	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.000	<0.001
	19-Apr-88	601	0.0017	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.000	<0.001
	24-Oct-88	8240	<0.005	<0.005	<0.010	<0.005	---	<0.005	<0.005	<0.005	<0.005	<0.000	---
W7	16-Aug-85	624	TR	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.012	---	---
	16-Aug-85	624	0.002	0.004	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.012	---	---
	05-Dec-85	601	0.0017	0.0037	<0.005	<0.005	---	<0.0005	<0.0005	<0.0005	0.010	---	<0.0005
	05-Dec-85	601	0.0025	0.004	<0.0005	<0.0005	---	0.001	<0.0005	<0.0005	0.011	---	0.0019
		601	<0.0005	0.007	<0.005	<0.005	---	<0.0005	<0.0005	<0.0005	0.011	---	---
	13-Feb-86	624	0.004	0.127	<0.005	0.004	0.004	<0.005	0.004	<0.005	<0.005	---	Acetone 0.004B
	06-Mar-86	601	0.004	0.006	<0.0005	<0.0005	---	<0.0005	0.001	<0.0005	0.013	---	<0.0005
	06-Mar-86	601	0.004	0.007	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	0.011	---	<0.0005
	06-Jun-86	601	0.0037	0.0066	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	0.0096	---	<0.0005
	14-Oct-86	601	0.0063	0.0062	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	0.012	---	<0.0005
	16-Jan-87	601	0.0053	0.005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	0.0096	---	<0.0005
	24-Apr-87	601	0.0071	0.0078	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	0.016	---	<0.001
	19-Aug-87	601	0.0063	0.0076	<0.005	<0.0005	---	0.0007	0.0007	<0.0005	0.015	---	<0.001
	14-Oct-87	601	0.0053	0.0066	<0.005	<0.0005	---	0.00068	0.0006	<0.0005	0.010	---	<0.001

TABLE 6  
Historical Water-Quality Data Summary:  
Volatile Organic Compounds  
Hewlett Packard Software Distribution Center  
(All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	1,1,1-TCA	TCE	Methylene Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
14-Oct-87	601	0.0072	0.0074	<0.0014	<0.0005	---	0.00078	<0.0002	<0.0004	0.016	---	<0.0006	---	
14-Oct-87	601	0.0057	0.003	<0.001	<0.001	---	<0.001	<0.001	<0.001	0.010	---	---	---	
11-Feb-88	601	0.0066	0.0099	<0.0014	<0.0005	---	<0.0005	<0.0002	<0.0004	0.020	---	---	---	
duplicate	601	0.0098	0.0099	<0.0005	<0.0005	---	0.0014	0.0005	<0.0005	0.015	---	<0.0005	0.001 1,2-DCA	
25-Apr-88	601	0.0065	0.0084	<0.010	<0.001	---	<0.001	<0.001	<0.001	0.015	---	<0.002	---	
13-Jul-88	601	0.0071	0.013	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	0.015	---	<0.001	---	
25-Oct-88	8240	0.0067	0.014	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	0.019	---	---	---	
W8A	20-Aug-85	624	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	---
	20-Aug-85	624	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	---
03-Dec-85	601&602	<0.001	<0.001	<0.01	<0.001	<0.01	<0.001	<0.001	<0.001	<0.01	<0.010	---	<0.001	---
03-Dec-85	624	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	0.030	---	---
05-Dec-85	601&602	<0.0005	<0.0005	0.088	<0.0005	0.0005	0.0007	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	---
07-Mar-86	624&625	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010	---	No 625 compounds detected
07-Mar-86	624&625	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	Acetone 0.007**
07-Mar-86	601	<0.0005	<0.0005	0.001	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005
03-Jun-86	601	<0.0005	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	---
03-Jun-86	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0009	---
13-Oct-86	601	<0.0005	<0.0005	<0.005	<0.0005	---	0.0016	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---
16-Jan-87	601	<0.0005	<0.0005	<0.005	<0.0005	---	0.0046	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---
22-Apr-87	601	<0.0005	<0.0005	<0.005	<0.0005	---	0.0037	0.0019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
19-Aug-87	601	0.0056	<0.0005	<0.005	<0.0005	---	<0.0005	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	---
16-Oct-87	601	<0.0005	<0.0005	<0.005	<0.0005	---	0.0021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	---
16-Oct-87	601	<0.0005	<0.0003	<0.007	<0.0005	---	0.0039	<0.0002	<0.0004	<0.0004	<0.0004	<0.0006	<0.0006	---
22-Apr-88	601	<0.0005	<0.005	<0.0005	<0.0005	---	0.0024	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	---
26-Apr-88	604	---	---	---	---	---	---	---	---	---	<0.010	---	No compound detected	---

TABLE 6  
Historical Water-Quality Data Summary:  
Volatile Organic Compounds  
Hewlett Packard Software Distribution Center  
(All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	1,1,1-TCA	TCE	Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
	25-Oct-88	824.0	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	2-Butanone 0.110
WBB	20-Aug-85	624	TR	<0.005	<0.005	<0.005	TR	0.043	<0.005	<0.005	<0.005	<0.005	<0.005	Xylenes 0.007
	20-Aug-85	624	<0.005	<0.005	<0.005	<0.005	0.042	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	Xylenes 0.005
	03-Dec-85	601&602	0.0029	<0.001	<0.010	<0.001	0.0088	<0.001	<0.01	<0.001	<0.010	<0.001	<0.001	<0.001
	03-Dec-85	624	0.004	<0.001	<0.001	<0.001	0.015	<0.001	<0.001	<0.001	<0.001	0.001	0.190	---
	05-Dec-85	601&602	0.0049	<0.0005	0.013	<0.0005	0.002	0.012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	Xylenes 0.0021
	07-Mar-86	624	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
	07-Mar-86	625	---	---	---	---	---	---	---	---	---	---	---	---
	07-Mar-86	601	0.006	<0.0005	0.024**	<0.0005	---	0.001	0.001	<0.0005	<0.0005	<0.0005	<0.0005	0.043
	03-Jun-86	601	0.0073	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	CCl4 0.0014
	04-Jun-86	601&604	0.0056	<0.00006	0.0034	<0.0003	---	0.0005	<0.0007	<0.0005	<0.0005	<0.0005	<0.0005	0.053
	18-Jun-86	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
	13-Oct-86	601	0.0016	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	16-Jan-87	601	0.0038	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	22-Apr-87	601	0.0021	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
	19-Aug-87	601	0.0056	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
	16-Oct-87	601	0.0065	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
	16-Oct-87	601	0.0091	<0.0003	<0.007	<0.0005	---	<0.0005	<0.0002	<0.0004	<0.0004	<0.0004	<0.0006	---
	22-Apr-88	601	0.0041	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
	22-Apr-88	625	---	---	---	---	---	---	---	---	---	---	<0.100	---
	24-Oct-88	8240	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
WBB1	18-Jun-86	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
	18-Jun-86	624	<0.005	<0.005	TR**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	Acetone TR**
	22-Aug-86	624	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---

TABLE 6  
Historical Water-Quality Data Summary:  
Volatile Organic Compounds  
Hewlett Packard Software Distribution Center  
(All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	1,1,1-TCA	TCE	Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
22-Aug-86	624	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	...
13-Nov-86	601	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0037
24-Apr-87	601	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
19-Aug-87	601	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0018
16-Oct-87	601	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0024
16-Oct-87	601	0.0008	<0.0003	<0.0007	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0004	<0.0004	<0.0004	<0.0004	0.0035
24-Oct-88	8240	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
W9	18-Jun-86	624	0.003	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
18-Jun-86	624	0.005	<0.005	TR**	<0.005	TR	TR	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	Acetone TR**
23-Aug-86	624	<0.005	TR	TR**	TR	TR	TR	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	Xylenes TR
23-Aug-86	624	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
13-Nov-86	601	0.014	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0005
24-Apr-87	601	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	ccl4 0.014
14-Oct-87	601	0.0057	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
14-Oct-87	601	0.020	<0.0003	<0.0014	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0038	<0.0008	<0.0008	<0.0008	<0.0006
14-Oct-87	601	0.011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	---
24-Oct-88	8240	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
W10	18-Jun-86	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
25-Aug-86	624	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
12-Nov-86	601	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
24-Apr-87	601	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
24-Apr-87	601	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	---
14-Oct-87	601	0.0012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
14-Oct-87	601	0.0072	<0.0003	<0.0014	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0004	<0.0004	<0.0004	<0.0004	<0.0006

TABLE 6  
 Historical Water-Quality Data Summary:  
 Volatile Organic Compounds  
 Hewlett Packard Software Distribution Center  
 (All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	Methylene	Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
			1,1-TCA	TCE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
14-Oct-87	601	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
26-Apr-88	601	0.0046	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001
26-Apr-88	604	---	---	---	---	---	---	---	---	---	---	---	NO COMPOUND DETECTED
24-Oct-88	8240	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
W11	30-Jul-86	624	0.075	0.024	<0.025	0.190	<0.005	0.019	0.051	0.087	0.019	---	---
	30-Jul-86	624	0.086	0.027	<0.025	0.260	<0.005	0.007	0.050	0.078	0.026	---	---
	31-Jul-86	624	0.062	0.023	<0.005	0.290	TR	0.005	0.051	0.065	0.017	---	Acetone 0.010**
	31-Jul-86	601	0.300#	0.024	0.007	0.180	---	0.0075	0.080	0.080	0.022	---	<0.0025
	12-Nov-86	601	0.020	0.014	<0.005	0.065	---	0.0039	0.060	0.082	0.0017	---	<0.0005 1,2-DCA 0.0077
	12-Nov-86	601	0.012	0.0073	<0.010	0.044	---	0.0028	0.034	0.067	<0.001	---	1,2-DCA 0.0093; 1,1,2,2-PCA 0.0
	12-Nov-86	601	0.019**	0.020**	0.005	0.068	---	0.0039**	0.080**	0.090	0.009**	---	0.0012 1,2-DCA 0.013; MeBrCl2 0.002; C
	24-Apr-87	601	0.0054	0.0056	0.065	0.031	---	<0.0005	0.033	0.074	0.0072	---	<0.001 1,2-DCA 0.0080
	21-Oct-87	601	0.0034	0.0072	<0.010	0.029	---	<0.001	0.022	0.049	0.011	---	<0.002 1,2-DCA 0.0086
	21-Oct-87	601	0.011	0.0093	<0.007	0.031	---	<0.0005	0.030	0.055	0.026	---	<0.0006 1,2-DCA 0.011
	11-Feb-88	601	0.0037	0.0096	0.021	0.021	---	<0.0005	0.026	0.054	0.010	---	---
	26-Jan-88	601	0.0030	0.010	<0.0014	0.032	---	<0.0005	0.034	0.053	0.0098	---	0.0019 1,2-OCA 0.019
	26-Jan-88	601	0.0027	0.0096	<0.020	0.024	---	<0.0002	0.031	0.044	<0.002	---	<0.004 1,2-OCA 0.079
	22-Apr-88	601	0.0042	0.0085	<0.0005	0.035	---	0.0008	0.032	0.072	0.0054	---	<0.0005 1,2-DCA 0.047
	duplicate	601	0.0038	0.0069	<0.0005	0.028	---	<0.0005	0.025	0.076	<0.010	---	<0.001 1,2-DCA 0.033
	13-Jul-88	601	0.0006	0.0073	<0.005	0.013	---	0.0016	0.020	0.047	0.0022	---	<0.001 1,2-DCA 0.022
	20-Oct-88	8240	<0.005	0.0043##	<0.010	0.0089	<0.005	<0.005	0.018	0.045	<0.005	---	1,2-CDA 0.022
W12	24-Jul-86	624	<0.005	<0.005	<0.005	<0.005	TR	<0.005	<0.005	<0.005	---	---	---
	24-Jul-86	601	0.0006	0.0006	<0.0005	<0.0005	---	0.0009	0.0006	<0.005	<0.005	---	0.0015
	24-Jul-86	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---

TABLE 6  
Historical Water-Quality Data Summary:  
Volatile Organic Compounds  
Hewlett Packard Software Distribution Center  
(All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	1,1,1-TCA	TCE	Methylene Chloride	PCE	Toluene	Chlorotofrom 1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
24-Jul-86	624	GC-EC	---	---	---	---	---	---	---	---	<0.005	---	---
30-Jul-86	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
12-Nov-86	601	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0024
24-Apr-87	601	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
21-Oct-87	601	<0.0005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001
21-Oct-87	601	<0.0005	0.0004	<0.007	<0.005	<0.005	<0.005	<0.005	<0.002	<0.004	<0.004	<0.004	<0.0006
11-Feb-88	601	<0.0005	0.0008	<0.0014	<0.005	<0.005	<0.005	<0.005	<0.002	<0.004	<0.004	<0.004	---
26-Jan-88	601	<0.0005	0.0009	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001
20-Apr-88	601	<0.0005	0.0012	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001
19-Oct-88	8240 H	<0.005	<0.005	<0.010	<0.005	0.0031##	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
W13	24-Jul-86	624	0.0085	<0.005	<0.025	<0.005	<0.019	0.024	0.033	0.0013	---	---	---
24-Jul-86	624	GC-EC	---	---	---	---	---	---	---	---	<0.000	---	---
30-Jul-86	624	0.015	0.100	<0.025	<0.005	<0.005	0.033	0.050	0.120	0.004	---	---	---
12-Nov-86	601	0.048	0.370	<0.050	<0.005	<0.005	<0.005	0.240	0.430	0.005	---	0.011	---
24-Apr-87	601	0.0043	<0.0005	<0.005	<0.005	<0.005	0.020	0.0082	0.019	<0.0005	---	<0.001	---
24-Apr-87	601	0.0053	0.046	<0.0014	<0.0054	<0.0054	0.023	0.0013	0.024	0.0021	---	<0.0006	---
21-Oct-87	601	0.016	0.200	<0.050	<0.005	<0.005	0.0091B	0.065	0.200	0.0085	---	<0.010	---
21-Oct-87	601	0.025	0.220	<0.007	<0.005	<0.005	0.0068	0.095	0.230	0.0041	---	<0.0006	---
11-Feb-88	601	0.019	0.21	<0.014	0.005	---	0.013	0.054	0.14	0.014	---	---	---
20-Apr-88	601	0.0058	0.059	<0.020	<0.002	---	0.021	0.013	0.029	<0.002	---	<0.004	---
24-Oct-88	601	<0.050	0.520	<0.050	<0.050	<0.050	<0.050	0.066	0.160	<0.050	---	<0.050	---
19-Oct-88	8240	<0.050	0.350	<0.100	<0.050	<0.050	<0.050	0.064	0.140	<0.050	---	<0.050	---
W14	04-May-87	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	---

TABLE 6  
 Historical Water-Quality Data Summary:  
 Volatile Organic Compounds  
 Hewlett Packard Software Distribution Center  
 (All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	1,1,1-TCA	TCE	Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
	04-May-87	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
	20-Oct-87	601	<0.0005	<0.0005	<0.005	<0.005	---	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001
	20-Oct-87	601	<0.0005	<0.0003	<0.007	<0.0005	---	<0.005	<0.0002	<0.0004	<0.0004	<0.0004	<0.0006	---
	25-Jan-88	601	0.0024	<0.0005	<0.005	<0.0005	---	<0.005	0.0012	0.0011	<0.0005	<0.0005	<0.0005	<0.001
	19-Apr-88	601	<0.0005	<0.0005	<0.005	<0.0005	---	<0.005	<0.0005	<0.0005	0.0011	<0.0005	<0.0005	<0.001
	21-Oct-88	601	<0.0005	<0.0005	0.0009	<0.0005	---	<0.005	0.0006	<0.0005	<0.0005	<0.0005	<0.0005	1,2-DCA 0.0007
	21-Oct-88	8240	<0.005	<0.005	<0.010	<0.005	---	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
w15	04-May-87	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
w15	04-May-87	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
	20-Oct-87	601	0.0032	<0.0005	<0.005	<0.0005	---	<0.0005	0.0012	0.0015	<0.0005	<0.0005	<0.0005	<0.001
	20-Oct-87	601	0.0054	<0.0003	<0.007	<0.0005	---	<0.0005	0.0014	0.0017	<0.0004	<0.0004	<0.0004	<0.0006
	25-Jan-88	601	0.0024	<0.0005	<0.005	<0.0005	---	<0.0005	0.0012	0.0011	<0.0005	<0.0005	<0.0005	<0.001
	19-Apr-88	601	0.0031	<0.0005	<0.005	<0.0005	---	<0.0005	0.0017	0.0018	<0.0005	<0.0005	<0.0005	<0.001
	20-Jul-88	601	0.0032	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	0.0012	<0.0005	<0.0005	<0.0005	<0.0005
	duplicate	601	0.003	<0.0005	<0.005	<0.0005	---	<0.0005	0.0006	0.0013	<0.0005	<0.0005	<0.0005	<0.0005
	13-Jul-88	601	0.002	<0.0005	<0.005	<0.0005	---	<0.0005	0.0009	0.0014	<0.0005	<0.0005	<0.0005	<0.001
	25-Oct-88	8240	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
w16	04-May-87	624	<0.005	0.270	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	0.005	0.005	---
w16	04-May-87	624	<0.005	0.510	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	0.007	0.007	0.007	---
	20-Aug-87	601	<0.0005	0.320	<0.005	<0.005	---	0.0006	<0.0005	<0.0005	0.011	<0.001	<0.001	---
	19-Oct-87	601	<0.005	0.220	<0.050	<0.005	---	<0.005	<0.005	<0.005	0.0053	<0.010	<0.010	---
	19-Oct-87	601	<0.0005	0.230	<0.007	<0.005	---	<0.0005	<0.0002	<0.0004	0.010	<0.0006	<0.0006	---
	26-Jan-88	601	<0.0005	0.270	<0.014	<0.0005	---	<0.0005	<0.0002	<0.0004	0.014	<0.0006	<0.0006	---
	26-Jan-88	601	<0.020	0.260	<0.200	<0.200	---	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	1,2-Dichloropropane 0.130

TABLE 6  
Historical Water-Quality Data Summary:  
Volatile Organic Compounds  
Hewlett Packard Software Distribution Center  
(All results expressed in Ppm)

Well or Sample No.	Date	Type of Analysis	1,1,1-TCA	TCE	Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
26-Apr-88	601	<0.020	0.300	<0.200	<0.020	---	<0.020	<0.020	<0.020	<0.020	<0.020	---	<0.040	
13-Jul-88	601	<0.0005	0.320	<0.005	<0.005	---	<0.005	<0.0005	<0.0005	0.014	---	<0.001	---	
25-Oct-88	8240	<0.005	0.500	<0.010	<0.005	<0.005	<0.005	0.022	<0.005	<0.005	---	---	---	
W17	04-May-87	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
	05-May-87	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
	06-May-87	601	<0.00045	<0.00034	<0.0014	<0.00054	---	<0.00049	<0.00028	<0.00044	<0.00042	---	---	---
	20-Aug-87	601	0.0021	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	0.0013	---	<0.001
	14-Oct-87	601	0.014	<0.0005	<0.005	<0.0005	---	<0.0005	0.0014	0.0049	0.0006	---	<0.001	---
	14-Oct-87	601	0.0022	<0.0003	<0.0014	<0.0005	---	<0.0005	<0.0002	<0.0004	0.0012	---	<0.0006	---
	14-Oct-87	601	0.002	<0.001	<0.001	<0.001	---	<0.001	<0.001	<0.001	<0.001	---	---	---
	26-Jan-88	601	0.0017	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	---	<0.001
	26-Apr-88	601	0.0019	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	0.0008	---	<0.001
	24-Oct-88	601	0.0032	0.001	<0.0005	<0.0005	---	<0.0005	0.0006	<0.0005	0.0018	---	<0.0005	---
	21-Oct-88	8240	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
W18	22-Apr-87	624	<0.005	0.070	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
	22-Apr-87	624	<0.005	0.180	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
	04-May-87	624	<0.005	0.087	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
	20-Aug-87	601	<0.0005	0.045	<0.005	<0.005	---	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	20-Oct-87	610	<0.0005	0.025	<0.005	<0.005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	20-Oct-87	601	<0.0005	0.032	<0.007	<0.0005	---	0.00058	<0.0002	<0.0004	0.0006	0.0006	---	<0.0006
	26-Jan-88	601	<0.0005	0.320	<0.005	0.0007	---	0.0008	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	25-Apr-88	601	<0.002	0.051	<0.020	<0.020	---	<0.002	<0.002	<0.002	<0.002	<0.002	---	<0.004
	13-Jul-88	601	<0.0005	0.150	<0.005	<0.005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	25-Oct-88	8240	<0.005	0.021	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---

TABLE 6  
Historical Water-Quality Data Summary:  
Volatile Organic Compounds  
Hewlett Packard Software Distribution Center  
(All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	1,1,1-TCA	TCE	Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,2-DCA	PCP	Freon-113	Other Compounds
E-1	25-Apr-88	601	0.0036	0.033	<0.020	<0.002	---	<0.002	<0.002	<0.002	---	<0.004	NO COMPOUND DETECTED
	25-Apr-88	625	---	---	---	---	---	---	---	---	<0.100	---	
	13-Jul-88	601	0.0039	0.0038	<0.005	<0.005	---	<0.005	<0.005	<0.005	---	<0.001	
	19-Oct-88	624	0.0055	0.012	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	
E2 (W19)	04-May-87	624	<0.005	0.550	<0.025	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
	05-May-87	624	<0.005	0.530	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
	04-May-87	601	<0.00045	0.330	<0.0014	0.0059	---	<0.0049	<0.0028	0.019	<0.0042	---	0.0026
	04-May-87	601	<0.00045	0.340	<0.0014	0.0072	---	<0.0049	<0.0028	0.032	<0.0042	---	0.0011
	16-Jul-87	601	<0.0005	0.100	<0.0014	0.0077	---	<0.0005	<0.0002	<0.0004	0.0015	---	<0.0006
	18-Aug-87	601	<0.0005	0.200	<0.005	0.0076	---	0.0006	<0.0005	0.0012	0.0017	---	<0.001
	12-Oct-87	601	0.0051	0.0057	<0.005	0.0005	---	<0.0005	<0.0005	<0.0005	---	<0.001	---
	12-Oct-87	601	<0.0005	0.290	<0.0014	0.019	---	<0.0005	<0.0002	0.0034	<0.0004	---	0.0006
	12-Oct-87	601	0.012	0.200	<0.010	0.016	---	<0.010	<0.010	<0.010	<0.010	---	Freon 11 0.014
	26-Jan-88	601	<0.010	0.160	<0.100	0.010	---	<0.010	<0.010	<0.010	<0.010	---	Freon 11 0.014
	25-Apr-88	601	<0.020	0.460	<0.020	<0.020	---	<0.020	<0.020	<0.020	<0.020	---	<0.040
	25-Apr-88	625	---	---	---	---	---	---	---	---	---	---	NO COMPOUND DETECTED
	13-Jul-88	601	0.0015	0.430	<0.005	0.022	---	<0.005	<0.005	0.012	0.0024	0.0086	---
	19-Oct-88	624	<0.005	0.760	<0.010	0.035	<0.005	<0.005	<0.005	0.0027	##	0.017	---
E3 (W20)	19-Sep-87	601	<0.250	1.50	<1.200	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	---	---
	23-Sep-87	601	<0.020	1.0	<0.200	<0.020	---	<0.020	<0.020	0.026	---	<0.040	---
	23-Sep-87	601	0.0018	0.820	<0.0014	0.0095	---	0.0015	<0.0002	0.002	0.050	---	0.0026
	20-Apr-88	601	<0.020	0.360	<0.200	<0.020	---	<0.020	<0.020	<0.020	<0.020	---	<0.040
	21-Apr-88	604	---	---	---	---	---	---	---	---	<0.010	---	NO COMPOUND DETECTED

TABLE 6  
Historical Water-quality Data Summary:  
Volatile Organic Compounds  
Hewlett Packard Software Distribution Center  
(All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	1,1,1-TCA	TCE	Methylene Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
13-Jul-88	601	0.0023	0.094	<0.005	0.011	---	<0.0005	0.0005	0.0012	0.0044	---	---	0.0026	---
19-Oct-88	624	0.011 ##	0.190	<0.050	0.081	<0.025	<0.025	0.019 ##	0.037	0.025	---	---	---	---
E4(W21)	19-Sep-87	624	<0.250	13.0	<1.200	<0.250	<0.250	<0.250	<0.250	0.490	---	---	---	---
	19-Sep-87	624	<0.001	9.0	<0.005	0.002	<0.001	0.009	0.005	<0.001	0.620	---	---	VICL 0.002; 1,1,2-TCA 0.006
	23-Sep-87	601	<0.100	7.4	<1.0	<0.100	---	<0.100	<0.100	0.210	---	<0.200	---	---
	23-Sep-87	601	<0.0005	8.808	<0.0014	<0.0005	---	0.018	0.0037	0.0023	0.360	---	<0.0006	bromoform 0.025
	19-Apr-88	601	<0.020	11.00	<0.200	<0.020	---	<0.020	<0.020	0.410	---	<0.040	---	---
	21-Apr-88	604	---	---	---	---	---	---	---	<0.010	---	NO COMPOUND DETECTED	---	---
	13-Jul-88	601	<0.0005	0.086	<0.005	0.0019	---	0.006	0.0072	<0.0005	0.086	---	<0.001	chlorobenzene 0.063
	19-Oct-88	624	<0.025	13.0	<0.050	<0.025	<0.025	<0.025	<0.025	0.310	---	---	---	---
E5(W22)	19-Sep-87	624	<0.025	0.130	<0.120	0.054	<0.025	<0.025	<0.025	<0.025	<0.025	---	---	---
	28-Sep-87	601	0.0032	0.076	<0.020	0.028	---	<0.002	0.0045	0.0047	<0.002	---	<0.004	---
	28-Sep-87	601	0.0035	0.073	<0.0014	0.046	---	<0.0005	0.0032	0.0068	<0.0004	---	<0.0011	---
	20-Apr-88	601	0.004	0.120	<0.020	0.026	---	<0.002	0.0043	0.0036	<0.002	---	<0.004	---
	21-Apr-88	625	---	---	---	---	---	---	---	---	---	<0.050	---	NO COMPOUND DETECTED
	13-Jul-88	601	0.009	<0.0005	<0.005	0.013	---	<0.0005	0.0088	0.0028	<0.0005	---	<0.001	---
	19-Oct-88	624	0.034	0.091	<0.050	0.290	<0.025	<0.025	0.077	0.120	<0.025	---	---	---
E6(W23)	19-Sep-87	624	0.011	<0.005	<0.025	0.047	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	---
	19-Sep-87	624	<0.005	<0.005	<0.005	0.043	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	---
	28-Sep-87	601	0.0076	<0.0005	<0.005	0.023	---	<0.0005	0.0051	0.0057	<0.0005	---	<0.001	---
	28-Sep-87	601	0.0063	0.0007	<0.0014	0.029	---	<0.0005	0.0038	<0.0004	<0.0004	---	<0.0006	---
	11-Feb-88	601	0.010	<0.0003	<0.0014	0.024	---	<0.0005	0.0075	0.0006	<0.0004	---	---	---
	26-Apr-88	601	0.0084	<0.0005	<0.005	0.021	---	<0.0005	0.0049	0.0007	<0.0005	---	<0.001	---

TABLE 6  
Historical Water-Quality Data Summary:  
Volatile Organic Compounds  
Hewlett Packard Software Distribution Center  
(All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	1,1,1-TCA	TCE	Chloride	PCE	Toluene	Chlorotform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
		Methylene												
26-Apr-88	625	---	---	---	---	---	---	---	---	---	---	<0.100	---	NO COMPOUND DETECTED
13-Jul-88	601	0.013	0.077	<0.005	0.092	---	0.0005	0.024	0.063	0.0012	---	<0.001	---	
19-Oct-88	624	0.007	<0.005	<0.010	0.012	<0.005	<0.005	0.0047	#	<0.005	<0.005	---	---	
W28	11-Feb-88	601	0.062	0.048	<0.0014	0.022	---	<0.0005	0.012	0.10	<0.0004	---	---	
	20-Oct-88	601	0.052	0.073	0.0006	0.013	---	0.0044	0.047	0.044	0.005	---	<0.0005	
	20-Oct-88	8240	0.040	0.076	<0.010	0.013	<0.005	0.0028	#	0.038	0.032	0.003	#	---
W31	22-Jan-88	624	0.086	0.65	<0.12	<0.025	<0.025	0.14	0.14	<0.025	---	---	---	
	11-Feb-88	601	0.060	0.37	<0.0014	0.019	---	<0.0005	0.16	0.26	0.015	---	---	
	20-Oct-88	8240	0.003 #	0.026	<0.010	<0.005	<0.005	<0.005	<0.005	0.0013	##	0.0032	##	---
	24-Oct-88	601	0.0038	0.033	<0.0005	0.001	---	<0.0005	0.0014	0.0018	0.0044	---	<0.0005	
W33	26-Jan-88	624	0.0062	0.017	<0.025	0.011	<0.005	<0.005	0.044	0.063	<0.005	---	---	
	25-Jan-88	624	0.006	0.012	<0.010	0.008	<0.002	<0.003	0.036	0.076	<0.003	---	---	
	11-Feb-88	601	0.0035	0.0005	<0.0014	0.0007	---	<0.0005	0.0010	0.0015	0.0057	---	---	
	21-Oct-88	8240	0.0029 #	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	---	---	
W34	22-Jan-88	624	0.023	0.10	<0.025	0.049	<0.005	<0.005	0.033	0.047	0.021	---	---	
	12-Feb-88	601	0.007	0.11	<0.0014	0.0077	---	<0.0005	0.028	0.056	0.026	---	---	
	20-Oct-88	8240 HH	<0.005	0.083	<0.010	0.0064	<0.005	<0.005	0.0094	0.010	0.011	---	1,2-DCA	0.020
W35	25-Nov-87	601	0.0006	<0.0005	<0.005	<0.005	---	0.0015	<0.0005	<0.0005	---	<0.001	---	
	duplicate	601	<0.0005	<0.0003	<0.0014	<0.0005	---	0.0006	<0.0002	<0.0004	<0.0004	---	<0.0006	---
	01-Dec-87	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	
	11-Feb-88	601	<0.0005	<0.0003	<0.0014	<0.0005	---	0.0010	<0.0002	<0.0004	<0.0004	---	---	

TABLE 6  
 Historical Water-Quality Data Summary:  
 Volatile Organic Compounds  
 Hewlett Packard Software Distribution Center  
 (All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	1,1,1-TCA	TCE	Methylene Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
22-Apr-88	601	<0.0005	<0.0005	<0.005	<0.005	<0.005	---	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001	---
20-Oct-88	8240	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	---
W36	25-Nov-87	601	0.00021	0.0006	<0.100	<0.005	---	<0.0005	0.370	0.510	<0.010	---	<0.001	C1Eth 0.340; 1,2-DCA 0.015
01-Dec-87	624	<0.005	<0.005	<0.025	<0.005	0.0062	<0.005	0.450	0.610	<0.005	---	---	---	C1Eth 0.250; 1,2-DCA 0.0087
11-Feb-88	601	0.0070	0.011	<0.0014	<0.0005	---	<0.0005	0.47	0.64	0.0029	---	---	---	---
22-Apr-88	601	<0.100	<0.100	<0.100	<0.100	---	<0.100	0.830	1.000	<0.100	---	<0.100	---	---
duplicate	601	<0.100	<0.100	<0.100	<0.100	---	<0.100	0.830	1.000	<0.100	---	<0.100	---	---
22-Apr-88	601	<0.050	<0.050	<0.50	<0.050	---	<0.050	0.570	0.790	<0.050	---	<0.100	---	---
19-Oct-88	8240	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	0.530	0.810	<0.050	---	---	---	Chloroethane 0.130
W37	30-Nov-87	601	0.0016	<0.0005	<0.005	<0.005	---	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001	---
01-Dec-87	624	<0.005	0.027	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0059	---	---	---
11-Feb-88	601	<0.0005	<0.0003	<0.0014	<0.0005	---	<0.0005	<0.0002	<0.0004	<0.0004	0.0004	---	---	---
20-Apr-88	601	0.0026	<0.0005	<0.005	<0.005	<0.005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0007	---	<0.001
20-Oct-88	8240	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	---
W39	22-Nov-87	601	0.0088	0.0062	<0.100	0.970	---	<0.010	0.085	0.048	0.022	---	<0.020	---
duplicate	601	0.082	0.053	0.0014	1.800	---	<0.0005	0.067	0.050	<0.0004	---	<0.0006	---	---
01-Dec-87	624	0.068	0.054	<0.025	0.660	<0.005	<0.005	0.070	0.037	0.025	---	---	---	1,2-DCA 0.0056
12-Feb-88	601	0.058	0.037	<0.0014	1.0	---	<0.0005	0.091	0.035	0.024	---	---	---	---
20-Apr-88	601	0.062	0.053	<0.200	0.640	---	<0.020	0.065	0.034	0.021	---	<0.040	---	---
20-Oct-88	8240	0.052	0.044	#>0.100	0.930	<0.050	<0.050	0.046	## 0.026	#>0.050	0.050	---	---	---
W40	22-Nov-87	601	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	---	<0.001	---
01-Dec-87	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	---

TABLE 6  
 Historical Water-Quality Data Summary:  
 Volatile Organic Compounds  
 Hewlett Packard Software Distribution Center  
 (All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	1,1,1-TCA	TCE	Methylene Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
	11-Feb-88	601	<0.0005	<0.0003	<0.0014	<0.0005	---	<0.0005	<0.0002	<0.0004	<0.0004	---	---	---
	20-Apr-88	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.005	<0.0005	<0.0005	<0.0005	---	<0.001	---
	20-Oct-88	8240	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
W41	18-Dec-87	624	0.031	<0.004	<0.010	0.31	<0.002	<0.003	0.009	<0.008	<0.008	<0.003	---	---
	19-Dec-87	624	0.022	<0.004	<0.010	0.22	<0.002	<0.003	0.010	<0.008	<0.008	<0.003	---	---
	12-Feb-88	601	0.042	0.0058	<0.0014	0.51	---	<0.0005	0.029	0.013	0.0038	---	---	---
	20-Apr-88	601	0.043	<0.020	<0.200	0.370	---	<0.020	0.032	<0.020	<0.020	---	<0.040	---
	20-Oct-88	8240	<0.005	0.011 ##	<0.010	0.430	<0.005	<0.005	0.024	0.009	0.004 ##	---	---	---
														---
W42	18-Dec-87	624	0.028	0.029	<0.010	0.37	<0.002	<0.003	0.008	<0.008	<0.003	---	---	---
	19-Dec-87	601	0.040	0.058	<0.010	2.400	---	<0.010	0.072	0.019	<0.010	---	<0.010	---
	19-Dec-87	624	0.052	0.009	<0.010	0.27	<0.002	<0.003	0.015	0.012	<0.003	---	---	---
	12-Feb-88	601	0.031	0.022	<0.0014	0.55	---	<0.0005	0.020	0.0090	0.0026	---	---	---
	20-Apr-88	601	0.034	0.017	<0.100	0.260	---	<0.010	0.023	0.013	<0.010	---	<0.020	---
	20-Oct-88	8240	0.025	0.075	<0.010	0.570	<0.005	<0.005	0.018	0.0082	0.0014 ##	---	---	---
W45	22-Jan-88	624	<0.005	0.15	<0.025	<0.005	<0.005	<0.005	0.014	<0.005	---	---	---	---
	11-Feb-88	601	0.0027	0.15	<0.0014	<0.0005	---	<0.0005	0.0024	0.013	0.0035	---	---	---
	20-Oct-88	8240	<0.005	0.067	<0.010	<0.005	<0.005	<0.005	<0.005	0.0036 ##	<0.005	---	---	---
														---

Field Blanks:  
 27-Jan-84 LLE-GC --- <0.005 --- <0.010 --- --- --- --- ---

17-Apr-84 LLE-GC --- <0.005 --- <0.010 --- --- --- --- ---

**TABLE 6**  
**Historical Water-quality Data Summary:**  
**Volatile Organic Compounds**  
**Hewlett Packard Software Distribution Center**  
(All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	1,1-TCA	TCE	Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
& DAI														
28-Jun-84	LLE-GC	<0.010	<0.005	---	<0.010	---	---	---	---	---	<0.140	---	---	
30-Oct-84	LLE-GC	<0.0005	<0.0005	---	<0.0005	---	---	---	---	---	---	---	---	
19-Feb-85	601	<0.0005	<0.0005	---	<0.0005	---	0.018	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	
07-Mar-86	601	<0.0005	<0.0005	0.083	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	
W1-FB	03-Jun-86	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005
	14-Oct-86	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005
	20-Aug-87	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	21-Oct-87	601	<0.0005	<0.0005	<0.0005	<0.0005	---	0.024	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	21-Oct-87	601	<0.0005	<0.0003	<0.0007	<0.0005	---	0.027	<0.0002	<0.0004	<0.0004	<0.0004	---	<0.0006
W5-FB	06-Jun-86	601	0.003	<0.0005	0.0006	<0.0005	---	<0.0005	0.0007	<0.0005	<0.0005	<0.0005	---	<0.0005
	15-Jan-87	601	0.0008	<0.0006	0.0007	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	0.0011
	22-Apr-87	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	19-Aug-87	601	<0.0005	<0.0005	<0.0005	<0.0005	---	0.0006	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	13-Oct-87	601	<0.001	<0.001	<0.001	<0.001	---	0.020	<0.001	<0.001	<0.001	<0.001	---	---
	13-Oct-87	601	<0.0005	<0.0003	<0.0014	<0.0005	---	0.043	<0.0002	<0.0004	<0.0004	<0.0004	---	<0.0006
W5B-FB	19-Aug-87	601	<0.0005	<0.0005	<0.0005	<0.0005	---	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	13-Oct-87	601	<0.0005	0.0005	<0.0005	<0.0005	---	0.035	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	13-Oct-87	601	<0.0005	<0.0003	<0.0014	<0.0005	---	0.047	<0.0002	<0.0004	<0.0004	<0.0004	---	<0.0006
	13-Oct-87	601	<0.001	<0.001	0.002	<0.001	---	0.026	<0.001	<0.001	<0.001	<0.001	---	---

TABLE 6  
Historical Water-Quality Data Summary:  
Volatile Organic Compounds  
Hewlett Packard Software Distribution Center  
(All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	1,1,1-TCA	TCE	Methylene Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
W6-FB	15-Jan-87	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005
	16-Jul-87	601	<0.0005	<0.0003	<0.0014	<0.0005	---	0.001	<0.0002	<0.0004	<0.0004	<0.0004	---	<0.0006
	18-Aug-87	601	<0.0005	<0.0005	<0.0005	<0.0005	---	0.0006	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	16-Oct-87	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	16-Oct-87	601	<0.0005	<0.0003	<0.0007	<0.0005	---	<0.0005	<0.0002	<0.0004	<0.0004	<0.0004	---	<0.0006
W6B1-FB	18-Jun-86	601	<0.0005	<0.0005	0.022	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005
	18-Jun-86	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.012	---
	22-Aug-86	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005
	22-Aug-86	624	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
	13-Nov-86	601	<0.0002	<0.0002	<0.0002	<0.0002	---	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	---	---
W7-FB	16-Jan-87	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005
	19-Aug-87	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	14-Oct-87	601	<0.0005	<0.0005	0.0053	<0.0005	---	0.031	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	14-Oct-87	601	<0.0005	<0.0003	<0.0014	<0.0005	---	0.036	<0.0002	<0.0004	<0.0004	<0.0004	---	<0.0006
	14-Oct-87	601	<0.001	<0.001	0.002	<0.001	---	0.015	<0.001	<0.001	<0.001	<0.001	---	---
W8A-FB	03-Jun-86	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	0.0006
	19-Aug-87	601	<0.0005	<0.0005	<0.0005	<0.0005	---	0.0006	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	16-Oct-87	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	16-Oct-87	601	<0.0005	<0.0003	<0.007	<0.0005	---	<0.0005	<0.0002	<0.0004	<0.0004	<0.0004	---	<0.0006
	25-Oct-88	8240	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
W8B-FB	04-Jun-86	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005
	18-Jun-86	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---

TABLE 6  
Historical Water-quality Data Summary:  
Volatile Organic Compounds  
Hewlett Packard Software Distribution Center  
(All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	1,1,1-TCA	TCE	Methylene Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
	19-Aug-87	601	<0.0005	<0.0005	<0.0005	<0.0005	---	0.0006	<0.0005	<0.0005	<0.0005	---	---	<0.001
	16-Oct-87	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	<0.001
	16-Oct-87	601	<0.0005	<0.0003	<0.0007	<0.0005	---	<0.0005	<0.0002	<0.0004	<0.0004	---	---	<0.0006
WBB1-FB	19-Aug-87	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	<0.001
	16-Oct-87	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	<0.001
	16-Oct-87	601	<0.0005	<0.0003	<0.0007	<0.0005	---	<0.0005	<0.0002	<0.0004	<0.0004	---	---	<0.0006
	24-Oct-88	8240	<0.005	<0.005	<0.010	<0.005	---	<0.005	<0.005	<0.005	<0.005	---	---	---
W9-FB	18-Jun-86	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	---
	23-Aug-86	624	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	---
	14-Oct-87	601	<0.0005	<0.0005	0.0079	<0.0005	---	0.039	<0.0005	<0.0005	<0.0005	---	---	<0.001
	14-Oct-87	601	<0.0005	<0.0003	<0.0014	<0.0005	---	0.046	<0.0002	<0.0004	<0.0004	---	---	<0.0006
	14-Oct-87	601	<0.001	<0.001	0.003	<0.001	---	0.024	<0.001	<0.001	<0.001	---	---	---
W10-FB	18-Jun-86	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	---
	14-Oct-87	601	<0.0005	<0.0005	0.009	<0.0005	---	0.038	<0.0005	<0.0005	<0.0005	---	---	<0.001
	14-Oct-87	601	<0.0005	<0.0003	<0.0014	<0.0005	---	0.048	<0.0002	<0.0004	<0.0004	---	---	<0.0006
	14-Oct-87	601	<0.001	<0.001	0.005	<0.001	---	0.033	<0.001	<0.001	<0.001	---	---	---
W11-FB	30-Jul-86	624	0.002	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	---
	31-Jul-86	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	---
	31-Jul-86	624	<0.005	<0.005	<0.005	<0.005	TR	<0.005	<0.005	<0.005	<0.005	---	---	1,1,2,2-TCA TR
	31-Jul-86	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	<0.0005
	12-Nov-86	601	<0.0005	<0.0005	<0.0005	<0.0002	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	<0.0005
	12-Nov-86	601	<0.0002	<0.0002	<0.0002	<0.0002	---	<0.0002	<0.0002	<0.0002	<0.0002	---	---	---

TABLE 6  
Historical Water-Quality Data Summary:  
Volatile Organic Compounds  
Hewlett Packard Software Distribution Center  
(All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	1,1,1-TCA	TCE	Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds	
12-Nov-86	601	0.0036**	0.0037**	<0.0005	<0.0005	---	<0.0005	0.0006**	<0.0005	0.0019**	---	0.0007	CCl4	0.0006	
21-Oct-87	601	<0.0005	<0.0005	<0.0005	<0.0005	---	0.029	<0.0005	<0.0005	<0.0005	---	0.0056	---	0.0056	
21-Oct-87	601	<0.0005	<0.0003	<0.0007	<0.0005	---	0.051	<0.0002	<0.0004	<0.0004	---	<0.0006	---	<0.0006	
26-Jan-88	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001	---	<0.001	
<hr/>															
W12-FB	24-Jul-86	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	<0.0005	
	21-Oct-87	601	<0.0005	<0.0003	<0.0007	<0.0005	---	0.036	<0.0002	<0.0004	<0.0004	---	<0.0006	---	<0.0006
<hr/>															
W13-FB	24-Jul-86	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	
	30-Jul-86	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	
	24-Apr-87	601	<0.0005	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	<0.001	---
	12-Nov-86	601	<0.0005	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	---
	21-Oct-87	601	<0.0005	<0.0005	<0.005	<0.0005	---	0.022	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001	---
	21-Oct-87	601	<0.0005	<0.0003	<0.007	<0.0005	---	0.034	<0.0002	<0.0004	<0.0004	<0.0004	---	<0.0006	---
<hr/>															
W14-FB	20-Oct-87	601	<0.0005	<0.0003	<0.007	<0.0005	---	0.037	<0.0002	<0.0004	<0.0004	---	<0.0006	---	<0.0006
<hr/>															
W15-FB	20-Oct-87	601	<0.0005	<0.0005	<0.005	<0.0005	---	0.038	<0.0005	<0.0005	<0.0005	---	<0.001	---	<0.001
	20-Oct-87	601	<0.0005	<0.0003	<0.007	<0.0005	---	0.035	<0.0002	<0.0004	<0.0004	---	<0.0006	---	<0.0006
	04-May-87	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---	---
	13-Jul-88	601	<0.0005	<0.0005	<0.0095	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	---
<hr/>															
W16-FB	20-Aug-87	601	<0.0005	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001	---
	19-Oct-87	601	<0.0005	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001	---
	19-Oct-87	601	<0.0005	<0.0003	<0.007	<0.0005	---	<0.0005	<0.0002	<0.0004	<0.0004	<0.0004	---	<0.0006	---

**TABLE 6**  
**Historical Water-Quality Data Summary:**  
**Volatile Organic Compounds**  
**Hewlett Packard Software Distribution Center**  
(All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	1,1,1-TCA	TCE	Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
	26-Jan-88	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
W17-FB	14-Oct-87	601	<0.0005	<0.0005	0.0051	<0.0005	---	0.038	<0.0005	<0.0005	<0.0005	---	---	<0.001
	14-Oct-87	601	<0.001	<0.001	0.005	<0.001	---	<0.001	<0.001	<0.001	<0.001	---	---	1,2-DCA 0.031
	04-May-87	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	cis-1,3-dichloropropene 0.008
	04-May-87	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
	20-Aug-87	601	<0.0005	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
W18-FB	22-Apr-87	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
	20-Aug-87	601	<0.0005	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	20-Oct-87	601	<0.0005	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	20-Oct-87	601	<0.0005	<0.0003	<0.007	<0.0005	---	0.039	<0.0002	<0.0004	<0.0004	<0.0004	---	<0.0006
W19-FB	04-May-87	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
	04-May-87	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
	04-May-87	601	<0.00045	0.0012	<0.0014	<0.00054	---	<0.00049	<0.00028	<0.00044	<0.00042	---	---	---
	16-Jul-87	601	<0.0005	<0.0003	<0.0014	<0.0005	---	0.0014	<0.0002	<0.0004	<0.0004	<0.0004	---	<0.0006
	18-Aug-87	601	<0.0005	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	12-Oct-87	601	<0.0005	<0.0005	<0.005	<0.0005	---	0.035	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	12-Oct-87	601	<0.0005	<0.0003	<0.0014	<0.0005	---	0.048	<0.0002	<0.0004	<0.0004	<0.0004	---	<0.0006
	12-Oct-87	601	<0.001	<0.001	0.002	<0.001	---	0.033	<0.001	<0.001	<0.001	<0.001	---	---
W20-FB	19-Aug-87	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
	23-Sep-87	601	<0.0005	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001
	23-Sep-87	601	<0.0005	<0.0003	<0.0014	<0.0005	---	<0.0005	<0.0002	<0.0004	<0.0004	<0.0004	---	<0.0006

TABLE 6  
 Historical Water-quality Data Summary:  
 Volatile Organic Compounds  
 Hewlett Packard Software Distribution Center  
 (All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	1,1-TCA	TCE	Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
W21-FB	19-Aug-87	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	---
	19-Aug-87	624	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	---
	23-Sep-87	601	<0.0005	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
	23-Sep-87	601	<0.0005	0.0038	<0.0014	<0.0005	---	<0.0005	<0.0002	<0.0004	<0.0004	<0.0004	<0.0004	<0.0006
W22-FB	19-Aug-87	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
	28-Sep-87	601	<0.0005	<0.0005	<0.005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
	28-Sep-87	601	<0.0005	<0.0003	<0.0014	<0.0005	---	<0.0005	<0.0002	<0.0004	<0.0004	<0.0004	<0.0004	<0.0006
W23-FB	19-Aug-87	624	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
	19-Aug-87	624	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001
	28-Sep-87	601	<0.0005	<0.0005	<0.005	<0.0005	---	0.024	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
	28-Sep-87	601	<0.0005	<0.0003	<0.0014	<0.0005	---	0.020	<0.0002	<0.0004	<0.0004	<0.0004	<0.0004	<0.0006
FBW28	11-Feb-88	601	<0.0005	<0.0003	0.060	<0.0005	---	<0.0005	<0.0002	<0.0004	<0.0004	<0.0004	<0.0004	---
FBS33	22-Jan-88	601	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
FBW39-1	22-Nov-87	601	<0.001	<0.001	<0.010	<0.001	---	0.036	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
duplicate		601	<0.0005	<0.0003	<0.0014	<0.0005	---	0.031	<0.0002	<0.0004	<0.0004	<0.0004	<0.0004	<0.0006
01-Dec-87	624	<0.005	<0.005	<0.025	<0.005	---	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---
FBW40	20-Oct-88	8240	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---

TABLE 6  
 Historical Water-quality Data Summary:  
 Volatile Organic Compounds  
 Hewlett Packard Software Distribution Center  
 (All results expressed in ppm)

Well or Sample No.	Date	Type of Analysis	1,1,1-TCA	TCE	Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Other Compounds
FBW1	12-Feb-88	601	<0.0005	<0.0003	0.050	<0.0005	---	<0.0005	<0.0002	<0.0004	<0.0004	---	---	---
FBW4-2	19-Dec-87	601	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.0005	---

TABLE 6  
Historical Water-Quality Data Summary:  
Volatile Organic Compounds  
Hewlett Packard Software Distribution Center  
(All results expressed in ppm)

NOTES AND ABBREVIATIONS

-- Denotes the compound was not analyzed.

B Compound detected in field blank.

H Sample exceeded holding time by 1 to 7 days

HH Sample exceeded holding time by 8 to 14 days

TR indicates the compound was found at trace levels, below the detection limit.

\* These samples were subject to duplicate analysis, with identical results.

\*\* These analytes were found in the method blank.

+ ATI laboratory error. Blank samples were inadvertently analyzed and reported.

++ Unacceptable data precision: Datum not used in evaluation exercises

# HPC reports this value is likely in error due to a high dilution factor.

## Estimated concentration detected below reporting limit.

Methods of Analysis:

LLE-GC = Liquid-Liquid extraction with hexane solvent - gas chromatography

DAI = direct aqueous injection

601 = EPA Method 601

602 = EPA Method 602

604 = EPA Method 604

624 = EPA Method 624

Laboratories:

HPC = Hewlett Packard Corporate, Palo Alto, CA

C&T = Curtis & Tompkins, Ltd., San Francisco, CA

CAL = California Analytical Laboratories, West Sacramento, CA

ATI = Analytical Technologies, Inc., San Diego, CA

ASA = Analytical Science Associates, Inc., Emeryville, CA

B&C = Brown & Caldwell, Emeryville, CA

CEC = Clayton Environmental Consultants, Inc., Pleasanton, CA

CRL = Chemical Research Laboratories, Stanton, CA

CWL = Chemwest Analytical Laboratories

Compound Abbreviations:

TCA	= 1,1,1-trichloroethane
TCE	= trichloroethylene
PCE	= tetrachloroethylene
DCE	= dichloroethylene
DCA	= dichloroethane
PCP	= pentachlorophenol
Freon 11	= trichlorofluoromethane
Freon-113	= 1,1,2-trichloro-2,2,1-trifluoroethane
CCl <sub>4</sub>	= carbon tetrachloride
ViCl	= vinyl chloride
PCA	= tetrachloroethane
ClBenz	= chlorobenzene
ClEth	= chloroethane
MeBrCl <sub>2</sub>	= bromodichloromethane

**TABLE 7**  
**Quality Assurance Data Summary:**  
**Precision of Duplicate Analyses**  
**and Volatile Organic Compounds Detected in Field Blanks**  
**Hewlett Packard Software Distribution Center**  
**(All results expressed in ppm)**

Well or Sample No.	Date	Lab	Lab ID	Analysis	1,1,1-TCA	TCE	Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113	Methylene		
																RPD	RPD	
W13	19-Oct-88	HPC	140-2	601	<0.050	0.520	<0.050	---	<0.050	0.066	0.16	<0.050	---	<0.050	---	---	---	
	19-Oct-88	HPC	140-7	601	<0.050	0.500	<0.050	---	<0.050	0.064	0.14	<0.050	---	<0.050	---	---	---	
	19-Oct-88	CWL	2496-3	8240	<0.050	0.350	<0.100	<0.050	<0.050	0.064	0.14	<0.050	---	---	---	---	---	
W14	21-Oct-88	HPC*	140-3	601	<0.0005	<0.0005	0.0009	<0.0005	---	<0.0005	0.0006	<0.0005	<0.0005	---	<0.0005	---	---	
	21-Oct-88	CWL	2496-4	8240	<0.005	<0.005	<0.010	<0.005	---	<0.005	<0.005	<0.005	<0.005	---	---	---	---	
	RPD	---	---	---	4%	---	---	---	---	---	3%	13%	---	---	---	---	---	
W17	24-Oct-88	HPC	140-4	601	0.0032	0.001	<0.0005	<0.0005	---	<0.0005	0.0006	<0.0005	<0.0005	0.0018	---	<0.0005	---	---
	21-Oct-88	CWL	2496-5	8240	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.003	---	---	---
	RPD	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
W28	20-Oct-88	HPC	140-5	601	0.052	0.073	0.0006	0.013	---	0.0044	0.047	0.044	0.005	0.005	---	<0.0005	---	---
	20-Oct-88	CWL	2496-6	8240	0.040	0.076	<0.010	0.013	<0.005	0.0028	0.038	0.032	0.032	0.003	---	---	---	---
	RPD	---	---	---	26%	4%	---	0%	---	44%	21%	32%	50%	---	---	---	---	
W31	20-Oct-88	CWL	2496-7	8240	0.003	0.026	<0.010	<0.005	<0.005	<0.005	0.0013	0.0013	0.0032	---	---	---	---	---
	24-Oct-88	HPC	140-6	601	0.0038	0.033	<0.0005	0.001	---	<0.0005	0.0014	0.0018	0.0044	0.0044	---	<0.0005	---	---
	RPD	---	---	---	24%	24%	---	---	---	---	32%	32%	---	---	---	---	---	---

**TABLE 7**  
**Quality Assurance Data Summary:**  
**Precision of Duplicate Analyses**  
**and Volatile Organic Compounds Detected in Field Blanks**  
**Hewlett Packard Software Distribution Center**  
**(All results expressed in ppm)**

Well or Sample No.	Date	Lab	Lab ID	Type of Analysis	1,1,1-TCA	TCE	Methylene Chloride	PCE	Toluene	Chloroform	1,1-DCE	1,1-DCA	1,2-DCE	PCP	Freon-113
<b>Field Blanks:</b>															
W6B1	24-Oct-88	CWL		8240	<0.005	<0.010	<0.005	---	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
W8A-FB	25-Oct-88	CWL	2529-2	8240	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
W8B1-FB	24-Oct-88	CWL	2512-9	8240	<0.005	<0.005	<0.010	<0.005	---	<0.005	<0.005	<0.005	<0.005	---	---
FBW40	20-Oct-88	CWL	2496-18	8240	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
TB	10-NOV-88	CWL	2529-8	624,8240,	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	---	---
				8 604											

#### NOTES AND ABBREVIATIONS

- = The compound was not analyzed.
- \* = 1,2 DCA was also detected at 0.0007 ppm.
- RPD = Relative Percent Difference, defined as the difference between two values divided by their arithmetic mean.

#### Laboratories:

- HPC = Hewlett Packard Corporate, Palo Alto, CA
- CAL = California Analytical Laboratories, West Sacramento, CA
- CEC = Clayton Environmental Consultants, Inc., Pleasanton, CA
- CWL = ChemWest Analytical Laboratories

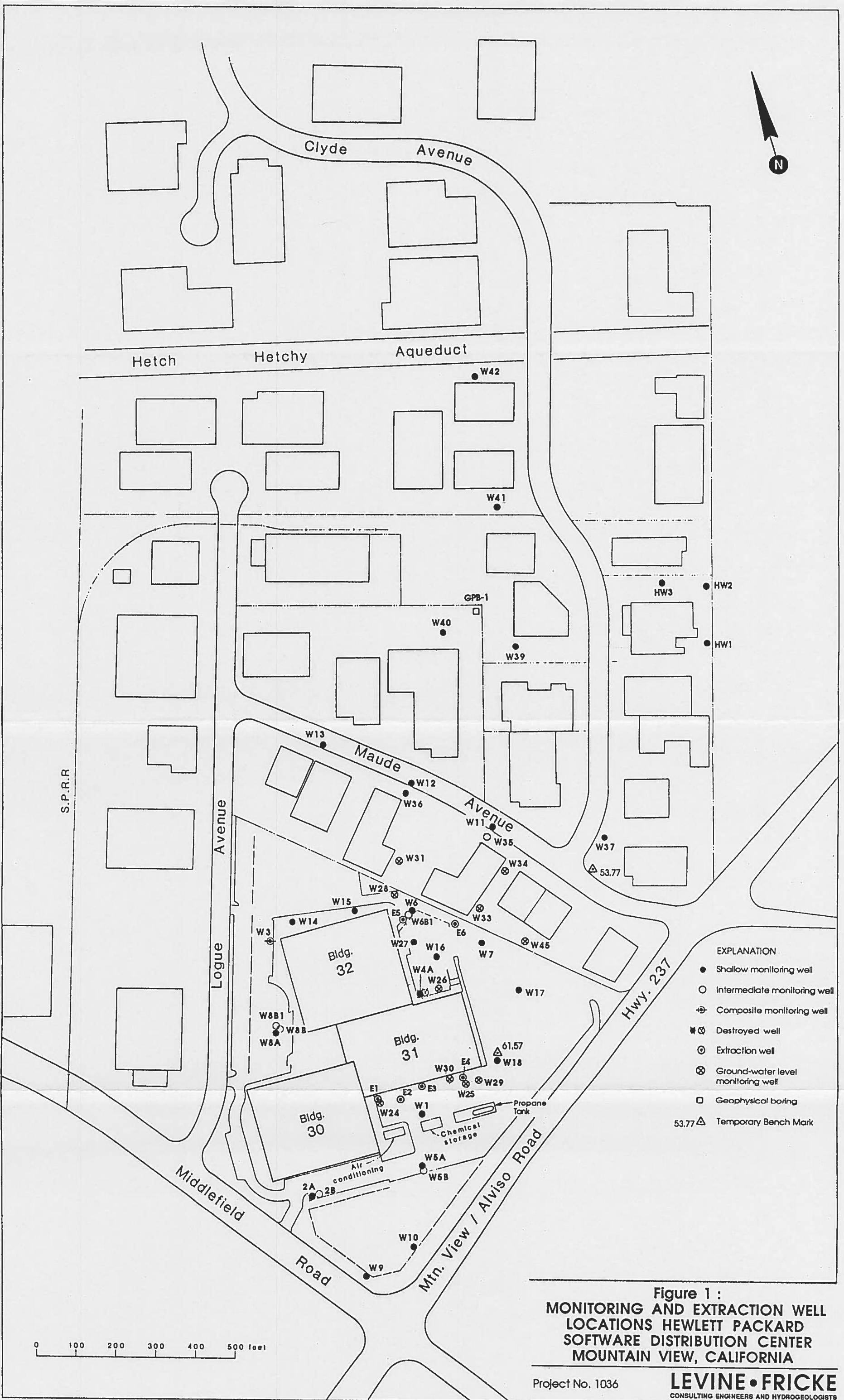
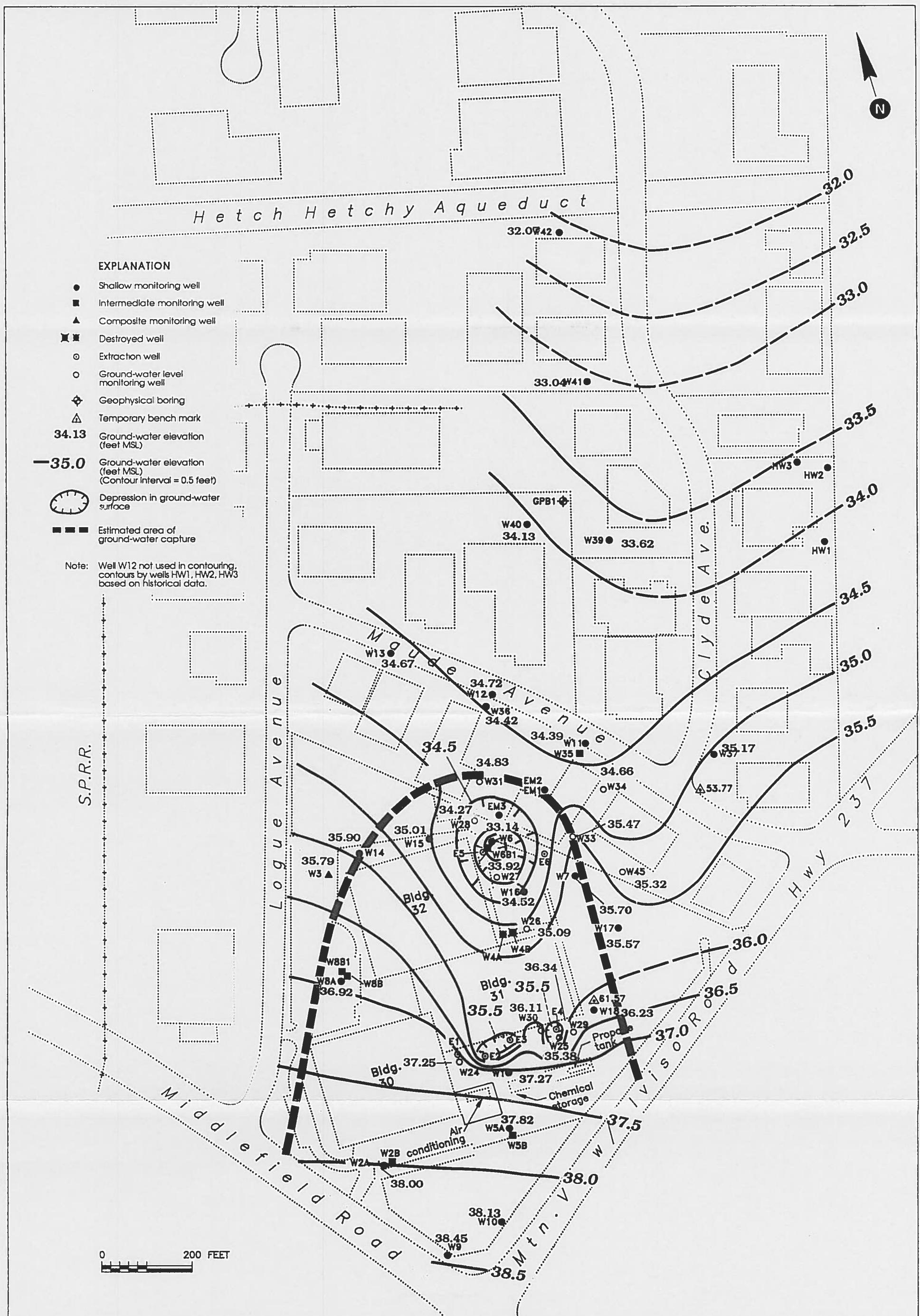


Figure 1 :  
MONITORING AND EXTRACTION WELL LOCATIONS HEWLETT PACKARD SOFTWARE DISTRIBUTION CENTER MOUNTAIN VIEW, CALIFORNIA

Project No. 1036

1036DB02NOV88j.c.F1

**LEVINE • FRICKE**  
CONSULTING ENGINEERS AND HYDROGEOLOGISTS



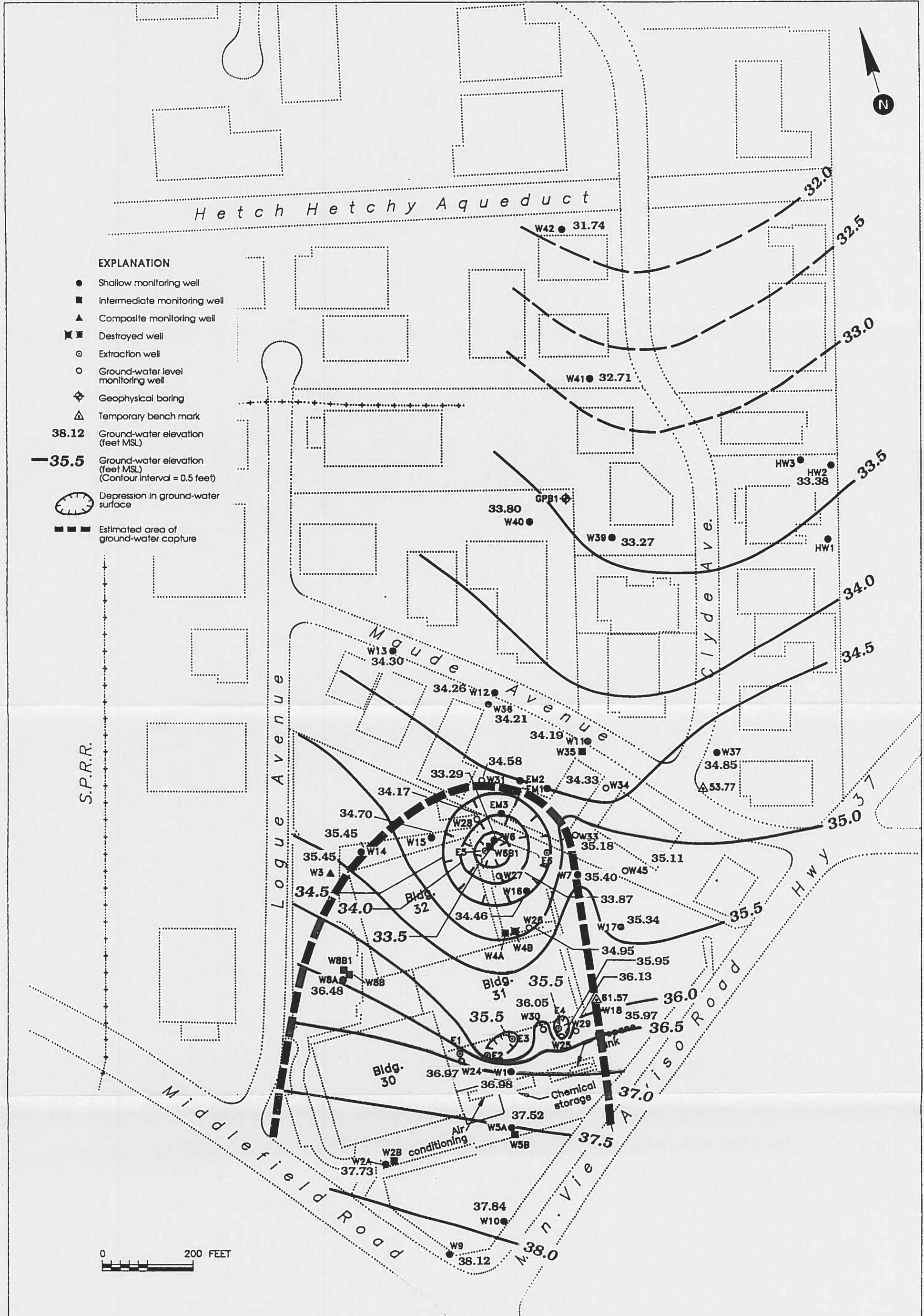
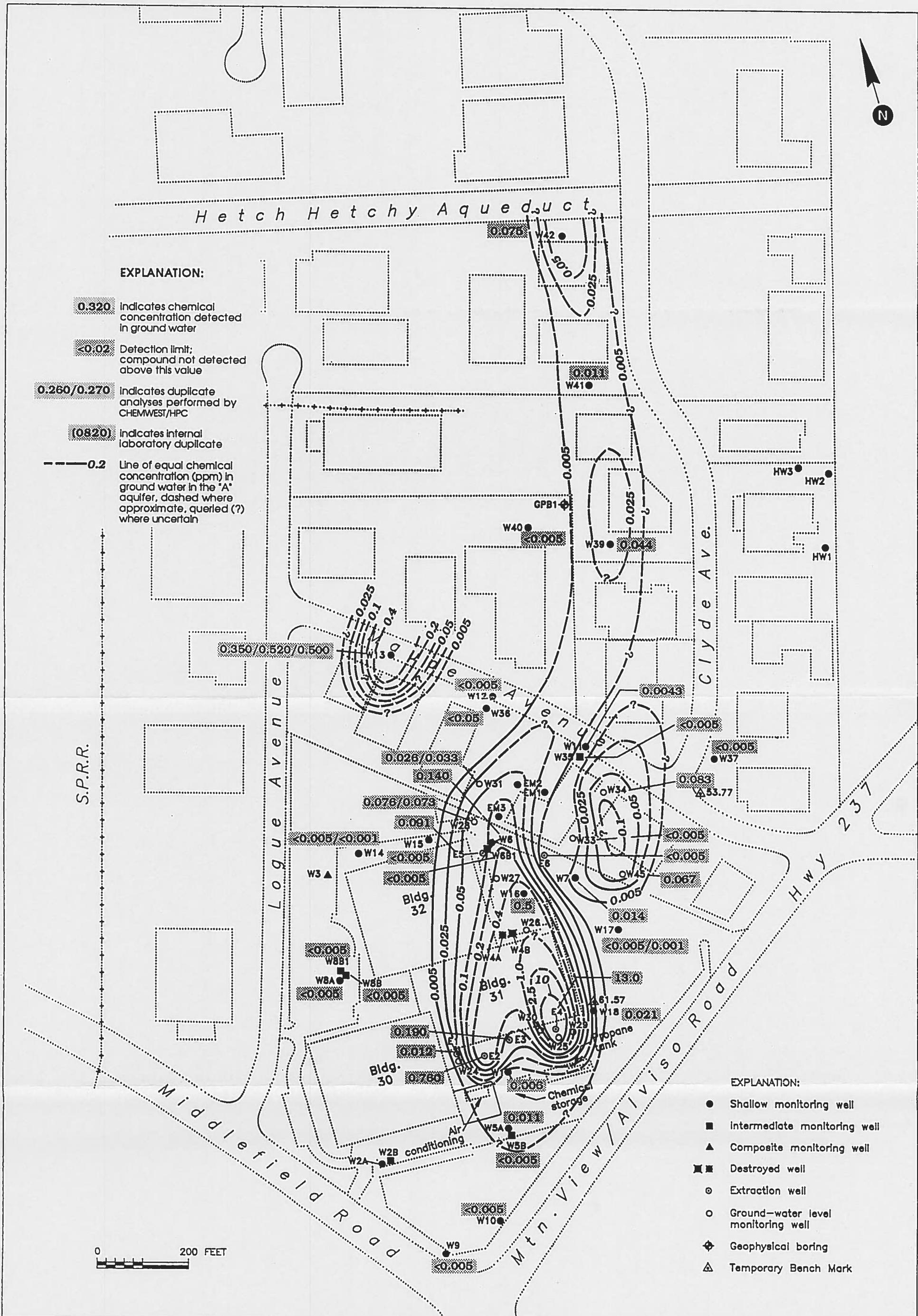


Figure 3 : CONTOURED GROUND-WATER ELEVATIONS FOR THE "A" ZONE, NOVEMBER 21, 1988



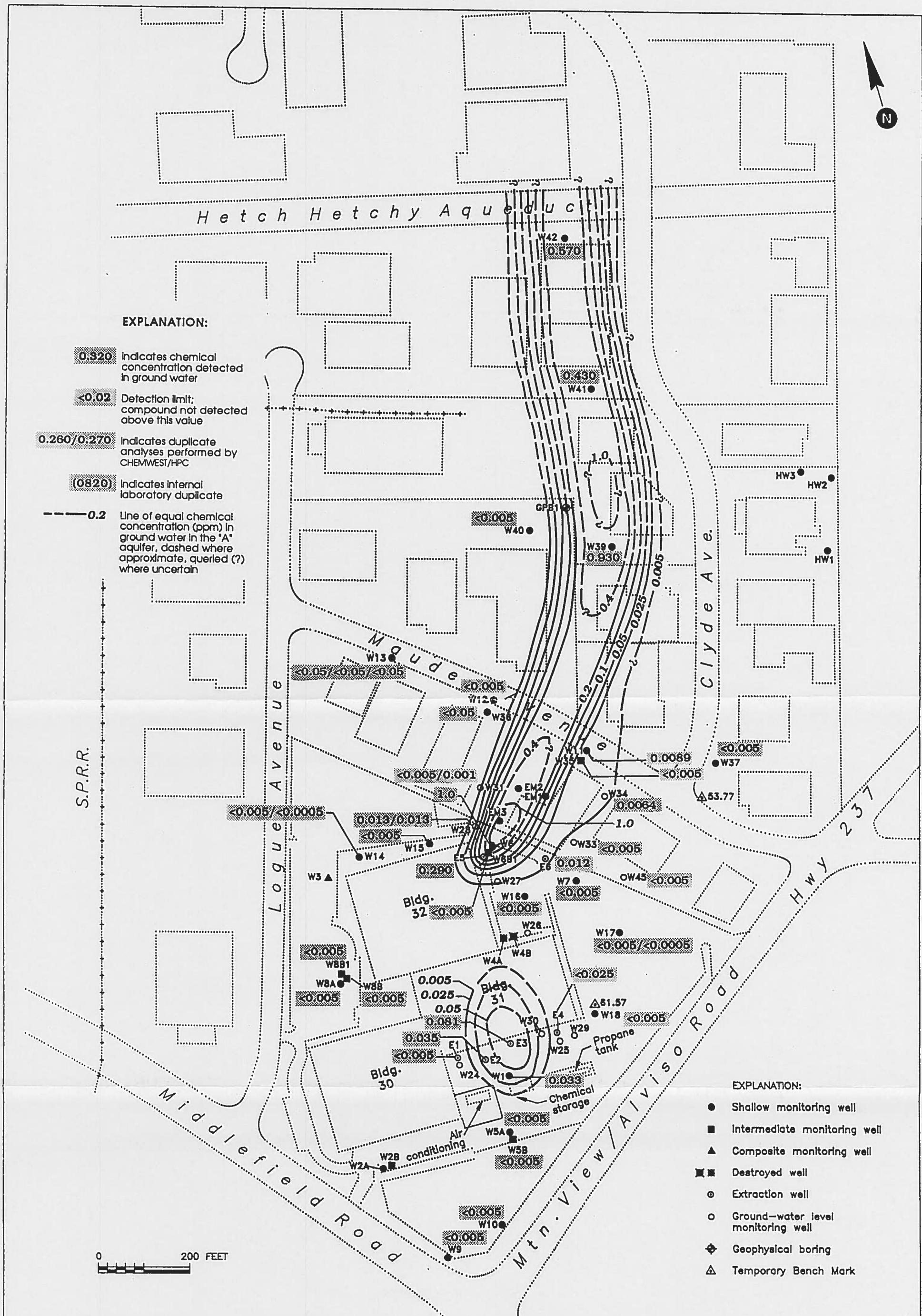


Figure 5 : CONTOURED PCE CONCENTRATIONS MEASURED IN SHALLOW GROUND WATER (ppm), OCTOBER 1988

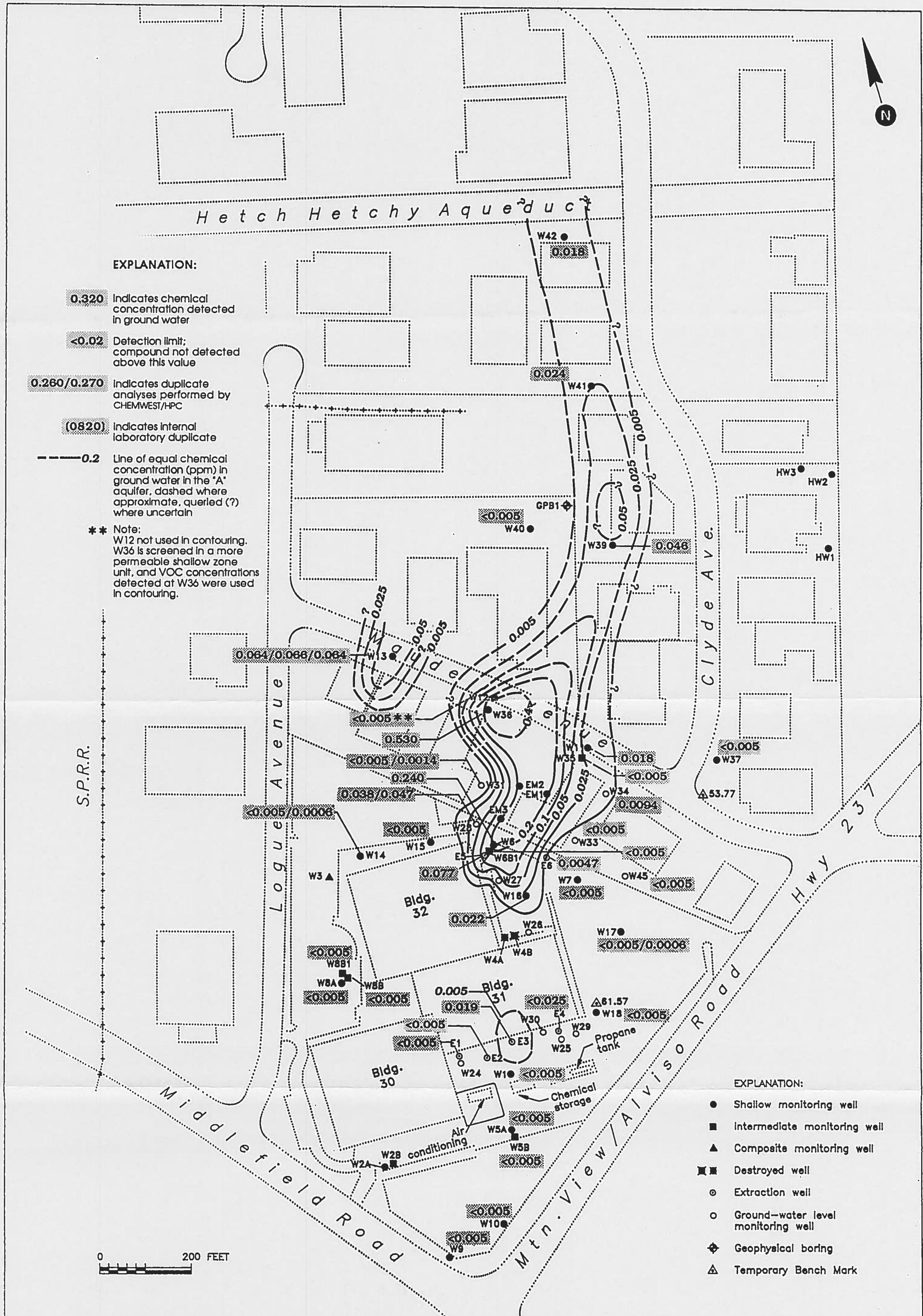


Figure 6 : CONTOURED 1,1-DCE CONCENTRATIONS MEASURED IN SHALLOW GROUND WATER (ppm), OCTOBER 1988

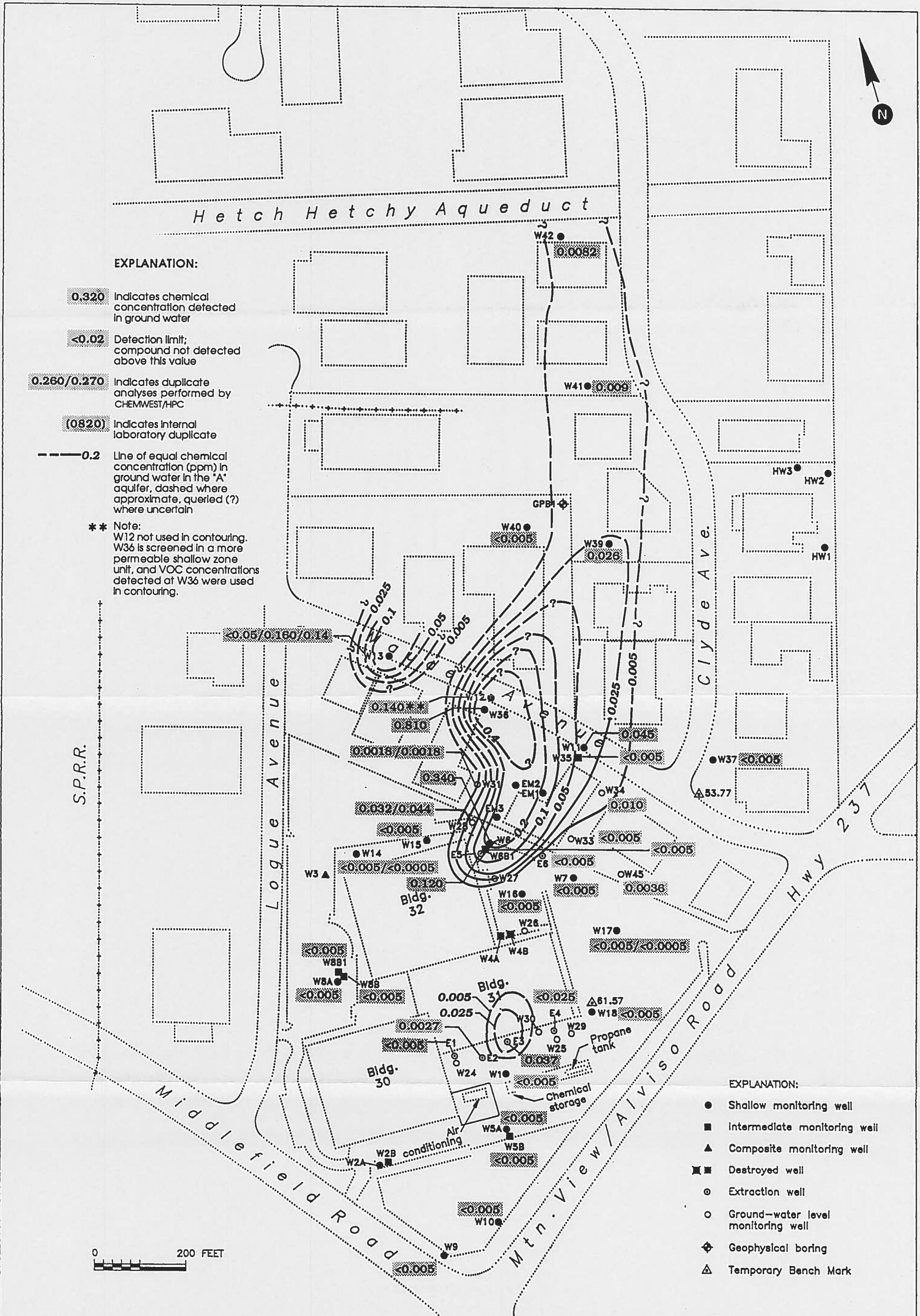
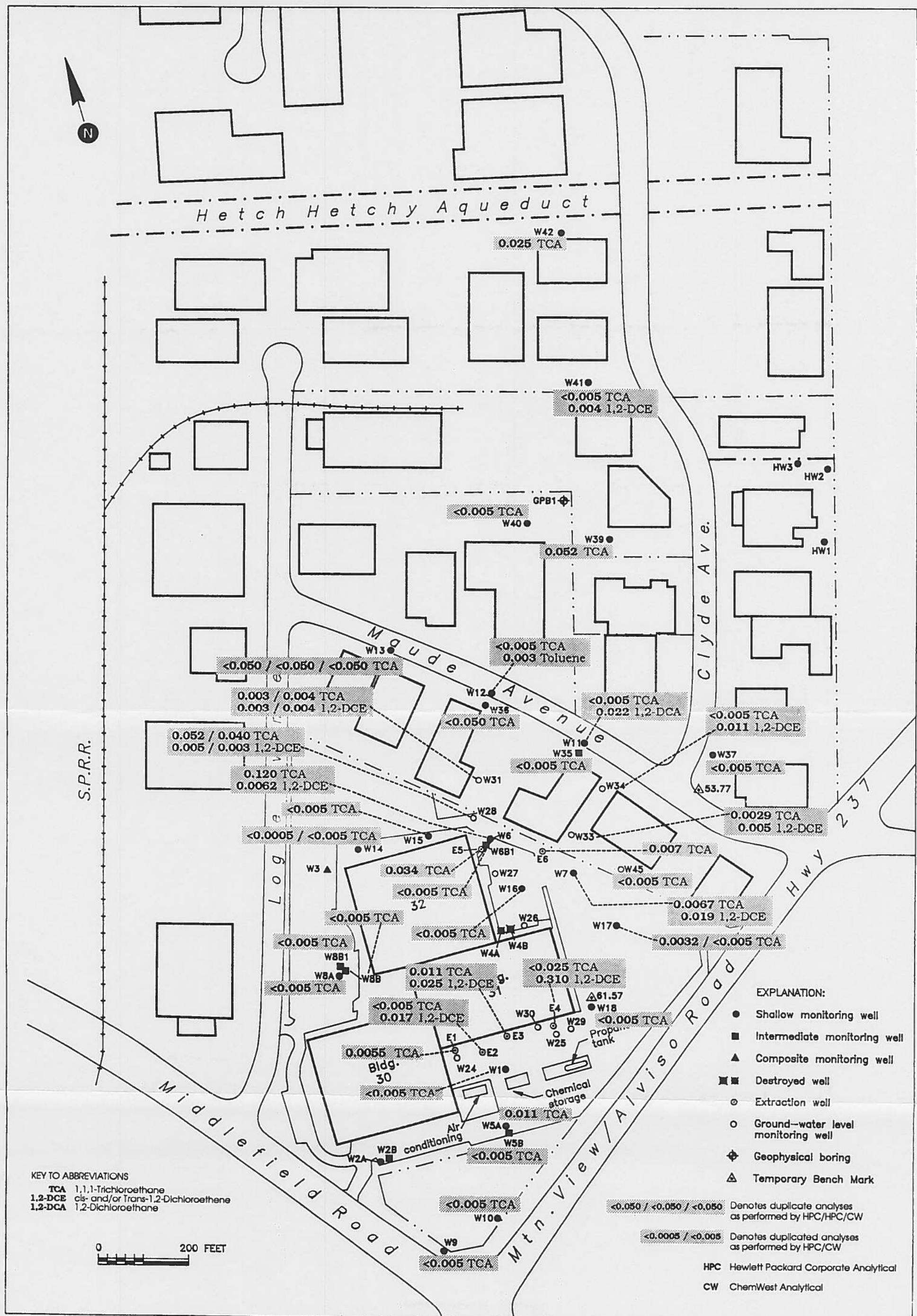


Figure 7 : CONTOURED 1,1-DCA CONCENTRATIONS MEASURED IN SHALLOW GROUND WATER (ppm), OCTOBER 1988



**APPENDIX A**

**TREATMENT SYSTEM SAMPLING**

**LABORATORY ANALYSIS RESULTS**

FGM

10-7-88

## Clayton Environmental Consultants, Inc.

P.O. Box 9019 • 1252 Quarry Lane • Pleasanton, CA 94566 • (415) 426-2600

October 28, 1988

Mr. Fred Moss  
Senior Civil Engineer  
LEVINE-FRICKE  
1900 Powell  
Emeryville, CA 94608

Client Ref. No.: 1047  
Lab Batch No.: 881030  
Clayton Project No.: 52978-72  
Client Code No.: 0214

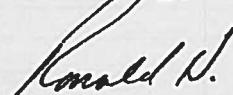
Dear Mr. Moss:

Attached is our analytical laboratory report for the samples received on October 7, 1988. A copy of the Chain of Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be retained at our facility for approximately 30 days after the date of this report, unless you have requested otherwise.

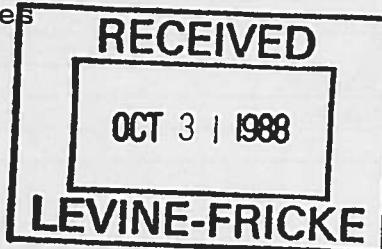
We appreciate the opportunity to be of assistance to you. If you have any questions, please call our Client Services Supervisor, Tony Blake, at (415) 426-2657.

Sincerely,



Ronald H. Peters, C.I.H.  
Manager, Laboratory Services

RHP/tb  
Attachment



**EPA METHOD 601**  
**PURGEABLE HALOCARBONS**

Sample I.D.:	INF-1	Client:	Levine Fricke
Sample Received:	10/07/88	Client Ref. No.:	1047
Sample Analyzed:	10/19/88	Lab Client Code:	0214
Sample Matrix:	Water	Lab No.:	881030-01

---

<u>Compound</u>	<u>Concentration</u> <u>µg/L (ppb)</u>	<u>Limit of Detection</u> <u>µg/L (ppb)</u>
Chloromethane	ND	3
Bromomethane	ND	4
Vinyl chloride	ND	3
Chloroethane	ND	3
Methylene chloride	ND	7
1,1-dichloroethene	9	1
1,1-dichloroethane	23	2
Trans-1,2-dichloroethene	ND	2
Trans-/Cis-1,2-dichloroethene (Total)	9	2
Chloroform	ND	3
1,2-dichloroethane	ND	2
1,1,1-trichloroethane	6	3
Carbon tetrachloride	ND	3
Bromodichloromethane	ND	4
1,2-dichloropropane	ND	3
Cis-1,3-dichloropropene	ND	3
Trichloroethene	280	2
Dibromochloromethane	ND	3
1,1,2-trichloroethane	ND	3
Trans-1,3-dichloropropene	ND	3
2-chloroethylvinylether	ND	5
Bromoform	ND	4
Tetrachloroethene	56	3
1,1,2,2-tetrachloroethane	ND	3
Chlorobenzene	ND	4
1,3-dichlorobenzene	ND	10
1,2-dichlorobenzene	ND	20
1,4-dichlorobenzene	ND	20
Dichlorodifluoromethane	ND	5
Trichlorofluoromethane	ND	2
Freon 113	ND	3

ND = Not detected at or above limit of detection

**EPA METHOD 601**  
**PURGEABLE HALOCARBONS**

Sample I.D.:	EFF-1	Client:	Levine Fricke
Sample Received:	10/07/88	Client Ref. No.:	1047
Sample Analyzed:	10/19/88	Lab Client Code:	0214
Sample Matrix:	Water	Lab No.:	881030-02

---

<u>Compound</u>	<u>Concentration</u> <u>µg/L (ppb)</u>	<u>Limit of Detection</u> <u>µg/L (ppb)</u>
Chloromethane	ND	0.6
Bromomethane	ND	0.7
Vinyl chloride	ND	0.5
Chloroethane	ND	0.5
Methylene chloride	ND	2
1,1-dichloroethene	ND	0.2
1,1-dichloroethane	ND	0.4
Trans-1,2-dichloroethene	ND	0.4
Trans-/Cis-1,2-dichloroethene (Total)	ND	0.4
Chloroform	ND	0.5
1,2-dichloroethane	ND	0.3
1,1,1-trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.6
Bromodichloromethane	ND	0.7
1,2-dichloropropane	ND	0.5
Cis-1,3-dichloropropene	ND	0.5
Trichloroethene	ND	0.3
Dibromochloromethane	ND	0.6
1,1,2-trichloroethane	ND	0.6
Trans-1,3-dichloropropene	ND	0.6
2-chloroethylvinylether	ND	1
Bromoform	ND	0.7
Tetrachloroethene	ND	0.5
1,1,2,2-tetrachloroethane	ND	0.5
Chlorobenzene	ND	0.7
1,3-dichlorobenzene	ND	2
1,2-dichlorobenzene	ND	4
1,4-dichlorobenzene	ND	4
Dichlorodifluoromethane	ND	1
Trichlorofluoromethane	ND	0.4
Freon 113	ND	0.6

ND = Not detected at or above limit of detection

**EPA METHOD 601**  
**PURGEABLE HALOCARBONS**

Sample I.D.:	ASE	Client:	Levine Fricke
Sample Received:	10/07/88	Client Ref. No.:	1047
Sample Analyzed:	10/19/88	Lab Client Code:	0214
Sample Matrix:	Water	Lab No.:	881030-03

---

<u>Compound</u>	Concentration µg/L (ppb)	Limit of Detection µg/L (ppb)
Chloromethane	ND	0.6
Bromomethane	ND	0.7
Vinyl chloride	ND	0.5
Chloroethane	ND	0.5
Methylene chloride	ND	2
1,1-dichloroethene	ND	0.2
1,1-dichloroethane	ND	0.4
Trans-1,2-dichloroethene	ND	0.4
Trans-/Cis-1,2-dichloroethene (Total)	ND	0.4
Chloroform	ND	0.5
1,2-dichloroethane	ND	0.3
1,1,1-trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.6
Bromodichloromethane	ND	0.7
1,2-dichloropropane	ND	0.5
Cis-1,3-dichloropropene	ND	0.5
Trichloroethene	ND	0.3
Dibromochloromethane	ND	0.6
1,1,2-trichloroethane	ND	0.6
Trans-1,3-dichloropropene	ND	0.6
2-chloroethylvinylether	ND	1
Bromoform	ND	0.7
Tetrachloroethene	ND	0.5
1,1,2,2-tetrachloroethane	ND	0.5
Chlorobenzene	ND	0.7
1,3-dichlorobenzene	ND	2
1,2-dichlorobenzene	ND	4
1,4-dichlorobenzene	ND	4
Dichlorodifluoromethane	ND	1
Trichlorofluoromethane	ND	0.4
Freon 113	ND	0.6

ND = Not detected at or above limit of detection

EPA METHOD 601  
PURGEABLE HALOCARBONS

Sample I.D.: Method Blank Client: Levine Fricke  
Sample Received: Client Ref. No.: 1047  
Sample Analyzed: 10/19/88 Lab Client Code: 0214  
Sample Matrix: Water Lab No.: 881030-MB

<u>Compound</u>	<u>Concentration</u> <u>µg/L (ppb)</u>	<u>Limit of Detection</u> <u>µg/L (ppb)</u>
Chloromethane	ND	0.6
Bromomethane	ND	0.7
Vinyl chloride	ND	0.5
Chloroethane	ND	0.5
Methylene chloride	ND	2
1,1-dichloroethene	ND	0.2
1,1-dichloroethane	ND	0.4
Trans-1,2-dichloroethene	ND	0.4
Trans-/Cis-1,2-dichloroethene (Total)	ND	0.4
Chloroform	ND	0.5
1,2-dichloroethane	ND	0.3
1,1,1-trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.6
Bromodichloromethane	ND	0.7
1,2-dichloropropane	ND	0.5
Cis-1,3-dichloropropene	ND	0.5
Trichloroethene	ND	0.3
Dibromochloromethane	ND	0.6
1,1,2-trichloroethane	ND	0.6
Trans-1,3-dichloropropene	ND	0.6
2-chloroethylvinylether	ND	1
Bromoform	ND	0.7
Tetrachloroethene	ND	0.5
1,1,2,2-tetrachloroethane	ND	0.5
Chlorobenzene	ND	0.7
1,3-dichlorobenzene	ND	2
1,2-dichlorobenzene	ND	4
1,4-dichlorobenzene	ND	4
Dichlorodifluoromethane	ND	1
Trichlorofluoromethane	ND	0.4
Freon 113	ND	0.6

ND = Not detected at or above limit of detection



10-24-88

# Clayton Environmental Consultants, Inc.

P.O. Box 9019 • 1252 Quarry Lane • Pleasanton, CA 94566 • (415) 426-2600

November 8, 1988

Mr. Fred Moss  
Senior Civil Engineer  
LEVINE-FRICKE  
1900 Powell Street  
Emeryville, CA 94608

Client Ref. No.: 1047  
Lab Batch No.: 8810140  
Clayton Project No.: 53391-72  
Client Code No.: 0214

Dear Mr. Moss:

Attached is our analytical laboratory report for the samples received on October 24, 1988. A copy of the Chain of Custody form acknowledging receipt of these samples is attached.

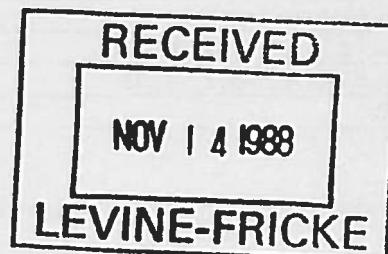
Please note that any unused portion of the samples will be retained at our facility for approximately 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please call our Client Services Supervisor, Tony Blake, at (415) 426-2657.

Sincerely,

Ronald H. Peters, C.I.H.  
Manager, Laboratory Services

RHP/ewq  
Attachment



**EPA METHOD 601**  
**PURGEABLE HALOCARBONS**

Sample I.D.:	E-1	Client:	LEVINE-FRICKE
Sample Received:	10/24/88	Client Ref. No.:	1047
Sample Analyzed:	10/27/88	Lab Client Code No.:	0214
Sample Matrix:	Water	Lab No.:	8810140-01

---

<u>Compound</u>	<u>Concentration</u> µg/L (ppb)	<u>Limit of Detection</u> µg/L (ppb)
Chloromethane	ND	0.6
Bromomethane	ND	0.7
Vinyl chloride	ND	0.5
Chloroethane	ND	0.5
Methylene chloride	ND	2
1,1-dichloroethene	ND	0.2
1,1-dichloroethane	ND	0.4
Trans-1,2-dichloroethene	ND	0.4
Trans-/Cis-1,2-dichloroethene (Total)	ND	0.4
Chloroform	ND	0.5
1,2-dichloroethane	ND	0.3
1,1,1-trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.6
Bromodichloromethane	ND	0.7
1,2-dichloropropane	ND	0.5
Cis-1,3-dichloropropene	ND	0.5
Trichloroethene	ND	0.3
Dibromochloromethane	ND	0.6
1,1,2-trichloroethane	ND	0.6
Trans-1,3-dichloropropene	ND	0.6
2-chloroethylvinylether	ND	1
Bromoform	ND	0.7
Tetrachloroethene	ND	0.5
1,1,2,2-tetrachloroethane	ND	0.5
Chlorobenzene	ND	0.7
1,3-dichlorobenzene	ND	2
1,2-dichlorobenzene	ND	4
1,4-dichlorobenzene	ND	4
Dichlorodifluoromethane	ND	1
Trichlorofluoromethane	ND	0.4
Freon 113	ND	0.6

ND = Not detected at or above limit of detection

**EPA METHOD 601**  
**PURGEABLE HALOCARBONS**

Sample I.D.:	I-1	Client:	LEVINE-FRICKE
Sample Received:	10/24/88	Client Ref. No.:	1047
Sample Analyzed:	10/27/88	Lab Client Code No.:	0214
Sample Matrix:	Water	Lab No.:	8810140-02

---

<u>Compound</u>	<u>Concentration</u> <u>µg/L (ppb)</u>	<u>Limit of Detection</u> <u>µg/L (ppb)</u>
Chloromethane	ND	0.6
Bromomethane	ND	0.7
Vinyl chloride	ND	0.5
Chloroethane	ND	0.5
Methylene chloride	ND	2
1,1-dichloroethene	94	0.4
1,1-dichloroethane	110	40
Trans-1,2-dichloroethene	0.6	0.4
Trans-/Cis-1,2-dichloroethene (Total)	6.7	0.4
Chloroform	ND	0.5
1,2-dichloroethane	2.2	0.3
1,1,1-trichloroethane	36	0.5
Carbon tetrachloride	ND	0.6
Bromodichloromethane	ND	0.7
1,2-dichloroproppane	ND	0.5
Cis-1,3-dichloropropene	ND	0.5
Trichloroethene	170	30
Dibromochloromethane	ND	0.6
1,1,2-trichloroethane	ND	0.6
Trans-1,3-dichloropropene	ND	0.6
2-chloroethylvinylether	ND	1
Bromoform	ND	0.7
Tetrachloroethene	250	50
1,1,2,2-tetrachloroethane	ND	0.5
Chlorobenzene	ND	0.7
1,3-dichlorobenzene	ND	2
1,2-dichlorobenzene	ND	4
1,4-dichlorobenzene	ND	4
Dichlorodifluoromethane	ND	1
Trichlorofluoromethane	ND	0.4
Freon 113	ND	0.6

ND = Not detected at or above limit of detection

**EPA METHOD 601**  
**PURGEABLE HALOCARBONS**

Sample I.D.:	Method Blank	Client:	LEVINE-FRICKE
Sample Received:		Client Ref. No.:	1047
Sample Analyzed:	10/27/88	Lab Client Code No.:	0214
Sample Matrix:	Water	Lab No.:	8810140-MB

---

<u>Compound</u>	<u>Concentration</u> <u>µg/L (ppb)</u>	<u>Limit of Detection</u> <u>µg/L (ppb)</u>
Chloromethane	ND	0.6
Bromomethane	ND	0.7
Vinyl chloride	ND	0.5
Chloroethane	ND	0.5
Methylene chloride	ND	2
1,1-dichloroethene	ND	0.2
1,1-dichloroethane	ND	0.4
Trans-1,2-dichloroethene	ND	0.4
Trans-/Cis-1,2-dichloroethene (Total)	ND	0.4
Chloroform	ND	0.5
1,2-dichloroethane	ND	0.3
1,1,1-trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.6
Bromodichloromethane	ND	0.7
1,2-dichloropropane	ND	0.5
Cis-1,3-dichloropropene	ND	0.5
Trichloroethene	ND	0.3
Dibromochloromethane	ND	0.6
1,1,2-trichloroethane	ND	0.6
Trans-1,3-dichloropropene	ND	0.6
2-chloroethylvinylether	ND	1
Bromoform	ND	0.7
Tetrachloroethene	ND	0.5
1,1,2,2-tetrachloroethane	ND	0.5
Chlorobenzene	ND	0.7
1,3-dichlorobenzene	ND	2
1,2-dichlorobenzene	ND	4
1,4-dichlorobenzene	ND	4
Dichlorodifluoromethane	ND	1
Trichlorofluoromethane	ND	0.4
Freon 113	ND	0.6

ND = Not detected at or above limit of detection

## CHAIN OF CUSTODY / ANALYSES REQUEST FORM

6810140

Project No.: 1047	Field Logbook No.:	Date: 10-24-88	Serial No.:						
Project Name: H.P.	Project Location: Mt. Vitellus		No. 4060						
Sampler (Signature): D. Roemer									
SAMPLES				ANALYSES				Samplers:	
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	TESTS	TESTS	TESTS	TESTS
E-1	10-24	10:29		2	H <sub>2</sub> O	*	*	*	*
T-1	"	"	"	"	H <sub>2</sub> O	*	*	*	*
REMARKS									

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: Courier	DATE	TIME	LAB COMMENTS:	TIME	
Sample Collector: 1900 Powers St. Eureka, CA 95501	10-24		LEVINE-FRICKE 629 Oakridge Avenue Oakland, CA 94602 (415) 652-4500	10/24/88 1:35 PM	
Shipping Copy (White)	Lab Copy (Green)	File Copy (Yellow)	Analytical Laboratory: <i>Citation Environmental</i>	Field Copy (Pink)	Form No. 86/COC/ARF

11-10-88

# Clayton Environmental Consultants, Inc.

P.O. Box 9019 • 1252 Quarry Lane • Pleasanton, CA 94566 • (415) 426-2600

November 29, 1988

Mr. Fred Moss  
LEVINE-FRICKE  
1900 Powell Street  
Emeryville, CA 94608

Client Ref. No.: 1047  
Lab Batch No.: 881159  
Clayton Project No.: 20216.00  
Client Code No.: 0214

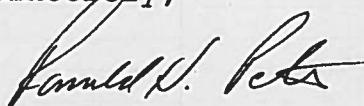
Dear Mr. Moss:

Attached is our analytical laboratory report for the samples received on November 10, 1988. A copy of the Chain of Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be retained at our facility for approximately 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please call our Client Services Supervisor, Tony Blake, at (415) 426-2657.

Sincerely,



Ronald H. Peters, CIH  
Manager, Laboratory Services

RHP/pf  
Attachment

**EPA METHOD 601**  
**PURGEABLE HALOCARBONS**

Sample I.D.:	INF-1	Client:	LEVINE-FRICKE
Sample Received:	11/10/88	Client Ref. No.:	1047
Sample Analyzed:	11/16/88	Lab Client Code:	0214
Sample Matrix:	Water	Lab No.:	881159-01

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<u>Compound</u>	<u>Concentration</u> <u>µg/L (ppb)</u>	<u>Limit of Detection</u> <u>µg/L (ppb)</u>
Chloromethane	ND	0.6
Bromomethane	ND	0.7
Vinyl chloride	ND	0.5
Chloroethane	ND	0.5
Methylene chloride	ND	2
1,1-dichloroethene	73	0.2
1,1-dichloroethane	100	0.4
Trans-1,2-dichloroethene	ND	0.4
Trans-/Cis-1,2-dichloroethene (Total)	4.3	0.4
Chloroform	ND	0.5
1,2-dichloroethane	ND	0.3
1,1,1-trichloroethane	27	0.5
Carbon tetrachloride	ND	0.6
Bromodichloromethane	ND	0.7
1,2-dichloropropane	ND	0.5
Cis-1,3-dichloropropene	ND	0.5
Trichloroethene	110	0.3
Dibromochloromethane	ND	0.6
1,1,2-trichloroethane	ND	0.6
Trans-1,3-dichloropropene	ND	0.6
2-chloroethylvinylether	ND	1
Bromoform	ND	0.7
Tetrachloroethene	220	0.5
1,1,2,2-tetrachloroethane	ND	0.5
Chlorobenzene	ND	0.7
1,3-dichlorobenzene	ND	2
1,2-dichlorobenzene	ND	4
1,4-dichlorobenzene	ND	4
Dichlorodifluoromethane	ND	1
Trichlorofluoromethane	ND	0.4
Freon 113	ND	0.6

ND = Not detected at or above limit of detection

**EPA METHOD 601  
PURGEABLE HALOCARBONS**

Sample I.D.:	EFF-1	Client:	LEVINE-FRICKE
Sample Received:	11/10/88	Client Ref. No.:	1047
Sample Analyzed:	11/16/88	Lab Client Code:	0214
Sample Matrix:	Water	Lab No.:	881159-02

---

<u>Compound</u>	<u>Concentration</u> <u>µg/L (ppb)</u>	<u>Limit of Detection</u> <u>µg/L (ppb)</u>
Chloromethane	ND	0.6
Bromomethane	ND	0.7
Vinyl chloride	ND	0.5
Chloroethane	ND	0.5
Methylene chloride	ND	2
1,1-dichloroethene	ND	0.2
1,1-dichloroethane	ND	0.4
Trans-1,2-dichloroethene	ND	0.4
Trans-/Cis-1,2-dichloroethene (Total)	ND	0.4
Chloroform	ND	0.5
1,2-dichloroethane	ND	0.3
1,1,1-trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.6
Bromodichloromethane	ND	0.7
1,2-dichloropropane	ND	0.5
Cis-1,3-dichloropropene	ND	0.5
Trichloroethene	ND	0.3
Dibromochloromethane	ND	0.6
1,1,2-trichloroethane	ND	0.6
Trans-1,3-dichloropropene	ND	0.6
2-chloroethylvinylether	ND	1
Bromoform	ND	0.7
Tetrachloroethene	ND	0.5
1,1,2,2-tetrachloroethane	ND	0.5
Chlorobenzene	ND	0.7
1,3-dichlorobenzene	ND	2
1,2-dichlorobenzene	ND	4
1,4-dichlorobenzene	ND	4
Dichlorodifluoromethane	ND	1
Trichlorofluoromethane	ND	0.4
Freon 113	ND	0.6

ND = Not detected at or above limit of detection

**EPA METHOD 601**  
**PURGEABLE HALOCARBONS**

Sample I.D.:	ASE	Client:	LEVINE-FRICKE
Sample Received:	11/10/88	Client Ref. No.:	1047
Sample Analyzed:	11/16/88	Lab Client Code:	0214
Sample Matrix:	Water	Lab No.:	881159-03

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<u>Compound</u>	<u>Concentration</u> <u>µg/L (ppb)</u>	<u>Limit of Detection</u> <u>µg/L (ppb)</u>
Chloromethane	ND	0.6
Bromomethane	ND	0.7
Vinyl chloride	ND	0.5
Chloroethane	ND	0.5
Methylene chloride	ND	2
1,1-dichloroethene	ND	0.2
1,1-dichloroethane	ND	0.4
Trans-1,2-dichloroethene	ND	0.4
Trans-/Cis-1,2-dichloroethene (Total)	ND	0.4
Chloroform	ND	0.5
1,2-dichloroethane	ND	0.3
1,1,1-trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.6
Bromodichloromethane	ND	0.7
1,2-dichloropropane	ND	0.5
Cis-1,3-dichloropropene	ND	0.5
Trichloroethene	ND	0.3
Dibromochloromethane	ND	0.6
1,1,2-trichloroethane	ND	0.6
Trans-1,3-dichloropropene	ND	0.6
2-chloroethylvinylether	ND	1
Bromoform	ND	0.7
Tetrachloroethene	ND	0.5
1,1,2,2-tetrachloroethane	ND	0.5
Chlorobenzene	ND	0.7
1,3-dichlorobenzene	ND	2
1,2-dichlorobenzene	ND	4
1,4-dichlorobenzene	ND	4
Dichlorodifluoromethane	ND	1
Trichlorofluoromethane	ND	0.4
Freon 113	ND	0.6

ND = Not detected at or above limit of detection

EPA METHOD 601  
PURGEABLE HALOCARBONS

Sample I.D.: Method Blank Client: LEVINE-FRICKE  
Sample Received: Client Ref. No.: 1047  
Sample Analyzed: 11/16/88 Lab Client Code: 0214  
Sample Matrix: Water Lab No.: 881159-MB

<u>Compound</u>	<u>Concentration</u> <u>µg/L (ppb)</u>	<u>Limit of Detection</u> <u>µg/L (ppb)</u>
Chloromethane	ND	0.6
Bromomethane	ND	0.7
Vinyl chloride	ND	0.5
Chloroethane	ND	0.5
Methylene chloride	ND	2
1,1-dichloroethene	ND	0.2
1,1-dichloroethane	ND	0.4
Trans-1,2-dichloroethene	ND	0.4
Trans-/Cis-1,2-dichloroethene (Total)	ND	0.4
Chloroform	ND	0.5
1,2-dichloroethane	ND	0.3
1,1,1-trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.6
Bromodichloromethane	ND	0.7
1,2-dichloropropane	ND	0.5
Cis-1,3-dichloropropene	ND	0.5
Trichloroethene	ND	0.3
Dibromochloromethane	ND	0.6
1,1,2-trichloroethane	ND	0.6
Trans-1,3-dichloropropene	ND	0.6
2-chloroethylvinylether	ND	1
Bromoform	ND	0.7
Tetrachloroethene	ND	0.5
1,1,2,2-tetrachloroethane	ND	0.5
Chlorobenzene	ND	0.7
1,3-dichlorobenzene	ND	2
1,2-dichlorobenzene	ND	4
1,4-dichlorobenzene	ND	4
Dichlorodifluoromethane	ND	1
Trichlorofluoromethane	ND	0.4
Freon 113	ND	0.6

ND = Not detected at or above limit of detection

## CHAIN OF CUSTODY / ANALYSES REQUEST FORM

881159

Project No.:	1047			Field Logbook No.:	Date: 11-10-88		Serial No.:	No. 4047	
Project Name:	HP			Project Location:	Mtn View				
Sampler (Signature) :	Sey			ANALYSES			Samplers:	Sey	
SAMPLES				HOLD RUSH		HOLD RUSH		REMARKS	
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE				
INF-1	11-10	11 <sup>00</sup>		2	H2O *				
EFF-1	"	11 4 4		2	*				
ASE	11	4 4		2	*				
				01					
				02					
				03					
Two week turn around									
RELINQUISHED BY: (Signature)	11-10-88		TIME 00		RECEIVED BY: <i>Jenny Saylor</i> (Signature)		DATE 11-10-88		TIME 3:30 pm
RELINQUISHED BY: (Signature)			TIME		RECEIVED BY: (Signature)		DATE		TIME
RELINQUISHED BY: (Signature)			TIME		RECEIVED BY: (Signature)		DATE		TIME
METHOD OF SHIPMENT: <i>Courier Carrier Service</i>			TIME		LAB COMMENTS:				
Sample Collector: <i>Levine-Fricke</i> 1900 Powell Emeryville, CA Shipping Copy (White)	629 Oakland Avenue Oakland, CA 94611-4567 (415) 652-4500			File Copy (Yellow) Lab Copy (Green)		Analytical Laboratory: <i>CH2TOV Environmental</i> Attn: <i>Tony Blake</i>		Field Copy (Pink)	

# Clayton Environmental Consultants, Inc.

P.O. Box 9019 • 1252 Quarry Lane • Pleasanton, CA 94566 • (415) 426-2600

December 2, 1988

Mr. Fred Moss  
Senior Civil Engineer  
LEVINE-FRICKE  
1900 Powell Street  
Emeryville, CA 94608

Client Ref. No.: 1047  
Lab Batch No.: 881194  
Clayton Project No.: 20419.00  
Client Code No.: 0214

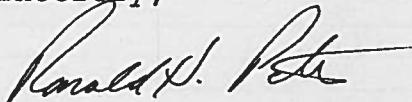
Dear Mr. Moss:

Attached is our analytical laboratory report for the samples received on November 17, 1988. A copy of the Chain of Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be retained at our facility for approximately 30 days after the date of this report, unless you have requested otherwise.

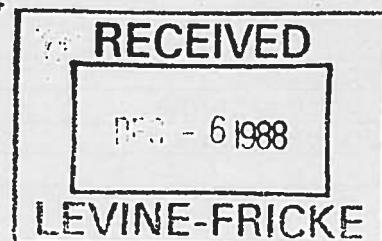
We appreciate the opportunity to be of assistance to you. If you have any questions, please call our Client Services Supervisor, Tony Blake, at (415) 426-2657.

Sincerely,



Ronald H. Peters, CIH  
Manager, Laboratory Services

RHP/tb  
Attachment



**EPA METHOD 601**  
**PURGEABLE HALOCARBONS**

Sample I.D.:	INF	Client:	LEVINE-FRICKE
Sample Received:	11/17/88	Client Ref. No.:	1047
Sample Analyzed:	11/30 & 12/01/88	Lab Client Code:	0214
Sample Matrix:	Water	Lab No.:	881194-01

---

<u>Compound</u>	<u>Concentration</u> <u>µg/L (ppb)</u>	<u>Limit of Detection</u> <u>µg/L (ppb)</u>
Chloromethane	ND	1
Bromomethane	ND	1
Vinyl chloride	ND	1
Chloroethane	ND	1
Methylene chloride	ND	4
1,1-dichloroethene	57	0.4
1,1-dichloroethane	110	0.8
Trans-1,2-dichloroethene	ND	0.8
Trans-/Cis-1,2-dichloroethene (Total)	4.5	0.8
Chloroform	ND	1
1,2-dichloroethane	2.6	0.6
1,1,1-trichloroethane	39	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-dichloropropane	ND	1
Cis-1,3-dichloropropene	ND	1
Trichloroethene	110	0.6
Dibromochloromethane	ND	1
1,1,2-trichloroethane	ND	1
Trans-1,3-dichloropropene	ND	1
2-chloroethylvinylether	ND	2
Bromoform	ND	1
Tetrachloroethene	200	1
1,1,2,2-tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-dichlorobenzene	ND	4
1,2-dichlorobenzene	ND	8
1,4-dichlorobenzene	ND	8
Dichlorodifluoromethane	ND	3
Trichlorofluoromethane	ND	0.8
Freon 113	ND	1

ND = Not detected at or above limit of detection

**EPA METHOD 601**  
**PURGEABLE HALOCARBONS**

Sample I.D.:	EFF	Client:	LEVINE-FRICKE
Sample Received:	11/17/88	Client Ref. No.:	1047
Sample Analyzed:	11/30/88	Lab Client Code:	0214
Sample Matrix:	Water	Lab No.:	881194-02

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<u>Compound</u>	<u>Concentration</u> µg/L (ppb)	<u>Limit of Detection</u> µg/L (ppb)
Chloromethane	ND	0.6
Bromomethane	ND	0.7
Vinyl chloride	ND	0.5
Chloroethane	ND	0.5
Methylene chloride	ND	2
1,1-dichloroethene	ND	0.2
1,1-dichloroethane	ND	0.4
Trans-1,2-dichloroethene	ND	0.4
Trans-/Cis-1,2-dichloroethene (Total)	ND	0.4
Chloroform	ND	0.5
1,2-dichloroethane	ND	0.3
1,1,1-trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.6
Bromodichloromethane	ND	0.7
1,2-dichloropropane	ND	0.5
Cis-1,3-dichloropropene	ND	0.5
Trichloroethene	ND	0.3
Dibromochloromethane	ND	0.6
1,1,2-trichloroethane	ND	0.6
Trans-1,3-dichloropropene	ND	0.6
2-chloroethylvinylether	ND	1
Bromoform	ND	0.7
Tetrachloroethene	ND	0.5
1,1,2,2-tetrachloroethane	ND	0.5
Chlorobenzene	ND	0.7
1,3-dichlorobenzene	ND	2
1,2-dichlorobenzene	ND	4
1,4-dichlorobenzene	ND	4
Dichlorodifluoromethane	ND	1
Trichlorofluoromethane	ND	0.4
Freon 113	ND	0.6

ND = Not detected at or above limit of detection

**EPA METHOD 601**  
**PURGEABLE HALOCARBONS**

Sample I.D.:	METHOD BLANK	Client:	LEVINE-FRICKE
Sample Received:		Client Ref. No.:	1047
Sample Analyzed:	11/30 & 12/01/88	Lab Client Code:	0214
Sample Matrix:	Water	Lab No.:	881194-MB

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<u>Compound</u>	<u>Concentration</u> <u>µg/L (ppb)</u>	<u>Limit of Detection</u> <u>µg/L (ppb)</u>
Chloromethane	ND	0.6
Bromomethane	ND	0.7
Vinyl chloride	ND	0.5
Chloroethane	ND	0.5
Methylene chloride	ND	2
1,1-dichloroethene	ND	0.2
1,1-dichloroethane	ND	0.4
Trans-1,2-dichloroethene	ND	0.4
Trans-/Cis-1,2-dichloroethene (Total)	ND	0.4
Chloroform	ND	0.5
1,2-dichloroethane	ND	0.3
1,1,1-trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.6
Bromodichloromethane	ND	0.7
1,2-dichloropropane	ND	0.5
Cis-1,3-dichloropropene	ND	0.5
Trichloroethene	ND	0.3
Dibromochloromethane	ND	0.6
1,1,2-trichloroethane	ND	0.6
Trans-1,3-dichloropropene	ND	0.6
2-chloroethylvinylether	ND	1
Bromoform	ND	0.7
Tetrachloroethene	ND	0.5
1,1,2,2-tetrachloroethane	ND	0.5
Chlorobenzene	ND	0.7
1,3-dichlorobenzene	ND	2
1,2-dichlorobenzene	ND	4
1,4-dichlorobenzene	ND	4
Dichlorodifluoromethane	ND	1
Trichlorofluoromethane	ND	0.4
Freon 113	ND	0.6

ND = Not detected at or above limit of detection

## **CHAIN OF CUSTODY / ANALYSES REQUEST FORM**

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**CHAIN OF CUSTODY / ANALYSES REQUEST FORM**

# Clayton Environmental Consultants, Inc.

P.O. Box 9019 • 1252 Quarry Lane • Pleasanton, CA 94566 • (415) 426-2600

December 30, 1988

Mr. Fred Moss  
LEVINE-FRICKE  
1900 Powell Street  
Emeryville, CA 94608

Client Ref. No.: 1047  
Lab Batch No.: 8812103  
Clayton Project No.: 20804.00  
Client Code No.: 0214

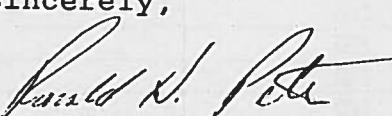
Dear Mr. Moss:

Attached is our analytical laboratory report for the samples received on December 12, 1988. A copy of the Chain of Custody form acknowledging receipt of these samples is attached. Because of instrument problems, the requested EPA 604 analyses were performed by EPA Method 625. These have been billed at the EPA 604 price.

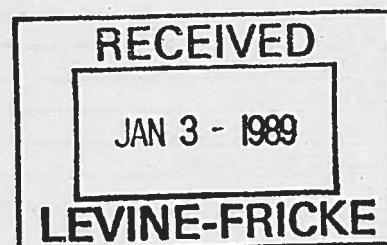
Please note that any unused portion of the samples will be retained at our facility for approximately 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Client Services at (415) 426-2657.

Sincerely,

  
Ronald H. Peters, CIH  
Manager, Laboratory Services

RHP/ewq  
Attachment



**EPA METHOD 601**  
**PURGEABLE HALOCARBONS**

Sample I.D.:	INF-1	Client:	LEVINE-FRICKE
Sample Received:	12/12/88	Client Ref. No.:	1047
Sample Analyzed:	12/21/88	Lab Client Code:	0214
Sample Matrix:	Water	Lab No.:	8812103-01

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<u>Compound</u>	<u>Concentration</u> <u>µg/L (ppb)</u>	<u>Limit of Detection</u> <u>µg/L (ppb)</u>
Chloromethane	ND	3
Bromomethane	ND	4
Vinyl chloride	ND	3
Chloroethane	ND	3
Methylene chloride	ND	10
1,1-dichloroethene	ND	1
1,1-dichloroethane	ND	2
Trans-1,2-dichloroethene	ND	2
Trans-/Cis-1,2-dichloroethene (Total)	22	2
Chloroform	ND	3
1,2-dichloroethane	ND	2
1,1,1-trichloroethane	ND	3
Carbon tetrachloride	ND	3
Bromodichloromethane	ND	4
1,2-dichloropropane	ND	3
Cis-1,3-dichloropropene	ND	3
Trichloroethene	860	2
Dibromochloromethane	ND	3
1,1,2-trichloroethane	ND	3
Trans-1,3-dichloropropene	ND	3
2-chloroethylvinylether	ND	5
Bromoform	ND	4
Tetrachloroethene	ND	3
1,1,2,2-tetrachloroethane	ND	3
Chlorobenzene	ND	4
1,3-dichlorobenzene	ND	10
1,2-dichlorobenzene	ND	20
1,4-dichlorobenzene	ND	20
Dichlorodifluoromethane	ND	5
Trichlorofluoromethane	ND	2
Freon 113	ND	.3

ND = Not detected at or above limit of detection

EPA METHOD 601  
PURGEABLE HALOCARBONS

Sample I.D.:	EFF-1	Client:	LEVINE-FRICKE
Sample Received:	12/12/88	Client Ref. No.:	1047
Sample Analyzed:	12/21/88	Lab Client Code:	0214
Sample Matrix:	Water	Lab No.:	8812103-02

---

<u>Compound</u>	<u>Concentration</u> <u>µg/L (ppb)</u>	<u>Limit of Detection</u> <u>µg/L (ppb)</u>
Chloromethane	ND	0.6
Bromomethane	ND	0.7
Vinyl chloride	ND	0.5
Chloroethane	ND	0.5
Methylene chloride	ND	10
1,1-dichloroethene	ND	0.2
1,1-dichloroethane	ND	0.4
Trans-1,2-dichloroethene	ND	0.4
Trans-/Cis-1,2-dichloroethene (Total)	ND	0.4
Chloroform	ND	0.5
1,2-dichloroethane	ND	0.3
1,1,1-trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.6
Bromodichloromethane	ND	0.7
1,2-dichloropropane	ND	0.5
Cis-1,3-dichloropropene	ND	0.5
Trichloroethene	ND	0.3
Dibromochloromethane	ND	0.6
1,1,2-trichloroethane	ND	0.6
Trans-1,3-dichloropropene	ND	0.6
2-chloroethylvinylether	ND	1
Bromoform	ND	0.7
Tetrachloroethene	ND	0.5
1,1,2,2-tetrachloroethane	ND	0.5
Chlorobenzene	ND	0.7
1,3-dichlorobenzene	ND	2
1,2-dichlorobenzene	ND	4
1,4-dichlorobenzene	ND	4
Dichlorodifluoromethane	ND	1
Trichlorofluoromethane	ND	0.4
Freon 113	ND	0.6

ND = Not detected at or above limit of detection

**EPA METHOD 601  
PURGEABLE HALOCARBONS**

Sample I.D.:	C-1	Client:	LEVINE-FRICKE
Sample Received:	12/12/88	Client Ref. No.:	1047
Sample Analyzed:	12/21/88	Lab Client Code:	0214
Sample Matrix:	Water	Lab No.:	8812103-03

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<u>Compound</u>	<u>Concentration</u> <u>µg/L (ppb)</u>	<u>Limit of Detection</u> <u>µg/L (ppb)</u>
Chloromethane	ND	0.6
Bromomethane	ND	0.7
Vinyl chloride	ND	0.5
Chloroethane	ND	0.5
Methylene chloride	ND	2
1,1-dichloroethene	ND	0.2
1,1-dichloroethane	ND	0.4
Trans-1,2-dichloroethene	0.4	0.4
Trans-/Cis-1,2-dichloroethene (Total)	1.8	0.4
Chloroform	ND	0.5
1,2-dichloroethane	ND	0.3
1,1,1-trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.6
Bromodichloromethane	ND	0.7
1,2-dichloropropane	ND	0.5
Cis-1,3-dichloropropene	ND	0.5
Trichloroethene	3.6	0.3
Dibromochloromethane	ND	0.6
1,1,2-trichloroethane	ND	0.6
Trans-1,3-dichloropropene	ND	0.6
2-chloroethylvinylether	ND	1
Bromoform	ND	0.7
Tetrachloroethene	ND	0.5
1,1,2,2-tetrachloroethane	ND	0.5
Chlorobenzene	ND	0.7
1,3-dichlorobenzene	ND	2
1,2-dichlorobenzene	ND	4
1,4-dichlorobenzene	ND	4
Dichlorodifluoromethane	ND	1
Trichlorofluoromethane	ND	0.4
Freon 113	ND	0.6

ND = Not detected at or above limit of detection

**EPA METHOD 601**  
**PURGEABLE HALOCARBONS**

Sample I.D.:	ASE	Client:	LEVINE-FRICKE
Sample Received:	12/12/88	Client Ref. No.:	1047
Sample Analyzed:	12/21/88	Lab Client Code:	0214
Sample Matrix:	Water	Lab No.:	8812103-04

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<u>Compound</u>	<u>Concentration</u> µg/L (ppb)	<u>Limit of Detection</u> µg/L (ppb)
Chloromethane	ND	0.6
Bromomethane	ND	0.7
Vinyl chloride	ND	0.5
Chloroethane	ND	0.5
Methylene chloride	ND	2
1,1-dichloroethene	ND	0.2
1,1-dichloroethane	ND	0.4
Trans-1,2-dichloroethene	ND	0.4
Trans-/Cis-1,2-dichloroethene (Total)	ND	0.4
Chloroform	ND	0.5
1,2-dichloroethane	ND	0.3
1,1,1-trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.6
Bromodichloromethane	ND	0.7
1,2-dichloropropane	ND	0.5
Cis-1,3-dichloropropene	ND	0.5
Trichloroethene	0.7	0.3
Dibromochloromethane	ND	0.6
1,1,2-trichloroethane	ND	0.6
Trans-1,3-dichloropropene	ND	0.6
2-chloroethylvinylether	ND	1
Bromoform	ND	0.7
Tetrachloroethene	ND	0.5
1,1,2,2-tetrachloroethane	ND	0.5
Chlorobenzene	ND	0.7
1,3-dichlorobenzene	ND	2
1,2-dichlorobenzene	ND	4
1,4-dichlorobenzene	ND	4
Dichlorodifluoromethane	ND	1
Trichlorofluoromethane	ND	0.4
Freon 113	ND	0.6

ND = Not detected at or above limit of detection

**EPA METHOD 601**  
**PURGEABLE HALOCARBONS**

Sample I.D.:	Method Blank	Client:	LEVINE-FRICKE
Sample Received:		Client Ref. No.:	1047
Sample Analyzed:	12/21/88	Lab Client Code:	0214
Sample Matrix:	Water	Lab No.:	8812103-MB

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<u>Compound</u>	<u>Concentration</u> <u>µg/L (ppb)</u>	<u>Limit of Detection</u> <u>µg/L (ppb)</u>
Chloromethane	ND	0.6
Bromomethane	ND	0.7
Vinyl chloride	ND	0.5
Chloroethane	ND	0.5
Methylene chloride	ND	2
1,1-dichloroethene	ND	0.2
1,1-dichloroethane	ND	0.4
Trans-1,2-dichloroethene	ND	0.4
Trans-/Cis-1,2-dichloroethene (Total)	ND	0.4
Chloroform	ND	0.5
1,2-dichloroethane	ND	0.3
1,1,1-trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.6
Bromodichloromethane	ND	0.7
1,2-dichloropropane	ND	0.5
Cis-1,3-dichloropropene	ND	0.5
Trichloroethene	ND	0.3
Dibromochloromethane	ND	0.6
1,1,2-trichloroethane	ND	0.6
Trans-1,3-dichloropropene	ND	0.6
2-chloroethylvinylether	ND	1
Bromoform	ND	0.7
Tetrachloroethene	ND	0.5
1,1,2,2-tetrachloroethane	ND	0.5
Chlorobenzene	ND	0.7
1,3-dichlorobenzene	ND	2
1,2-dichlorobenzene	ND	4
1,4-dichlorobenzene	ND	4
Dichlorodifluoromethane	ND	1
Trichlorofluoromethane	ND	0.4
Freon 113	ND	0.6

ND = Not detected at or above limit of detection

**EPA METHOD 625  
ACID EXTRACTABLES**

Sample I.D.:	INF-1	Client:	LEVINE-FRICKE
Sample Received:	12/12/88	Client Ref. No.:	1047
Sample Analyzed:	12/29/88	Lab Client Code:	0214
Sample Matrix:	Water	Lab No.:	8812103-05

	Concentration <u>µg/L (ppb)</u>	Limit of Detection <u>µg/L (ppb)</u>
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**ACID COMPOUNDS**

Phenol	ND	1
2-chlorophenol	ND	1
2-nitrophenol	ND	1
2,4-dimethylphenol	ND	1
2,4-dichlorophenol	ND	1
4-chloro-3-methylphenol	ND	1
2,4,6-trichlorophenol	ND	1
2,4-dinitrophenol	ND	5
4-nitrophenol	ND	5
2-methyl-4,6-dinitrophenol	ND	1
pentachlorophenol	ND	1

EPA METHOD 625  
ACID EXTRACTABLES

Sample I.D.:	EFF-1	Client:	LEVINE-FRICKE
Sample Received:	12/12/88	Client Ref. No.:	1047
Sample Analyzed:	12/29/88	Lab Client Code:	0214
Sample Matrix:	Water	Lab No.:	8812103-06

	Concentration <u>µg/L (ppb)</u>	Limit of Detection <u>µg/L (ppb)</u>
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ACID COMPOUNDS

Phenol	ND	1
2-chlorophenol	ND	1
2-nitrophenol	ND	1
2,4-dimethylphenol	ND	1
2,4-dichlorophenol	ND	1
4-chloro-3-methylphenol	ND	1
2,4,6-trichlorophenol	ND	1
2,4-dinitrophenol	ND	5
4-nitrophenol	ND	5
2-methyl-4,6-dinitrophenol	ND	1
pentachlorophenol	ND	1

EPA METHOD 625  
ACID EXTRACTABLES

Sample I.D.: Method Blank Client: LEVINE-FRICKE  
Sample Received: Client Ref. No.: 1047  
Sample Analyzed: 12/29/88 Lab Client Code: 0214  
Sample Matrix: Water Lab No.: 8812103-MB

	Concentration <u>µg/L (ppb)</u>	Limit of Detection <u>µg/L (ppb)</u>
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ACID COMPOUNDS

Phenol	ND	1
2-chlorophenol	ND	1
2-nitrophenol	ND	1
2,4-dimethylphenol	ND	1
2,4-dichlorophenol	ND	1
4-chloro-3-methylphenol	ND	1
2,4,6-trichlorophenol	ND	1
2,4-dinitrophenol	ND	5
4-nitrophenol	ND	5
2-methyl-4,6-dinitrophenol	ND	1
pentachlorophenol	ND	1

## CHAIN OF CUSTODY / ANALYSES REQUEST FORM

88/12/03

Project No.:	1047	Field Logbook No.:	Date: 12/12/88	Serial No.:	4075
Project Name:	HIP	Project Location:	M.T. View		
Sampler (Signature) :	Sey	ANALYSES			
SAMPLES		HOLD RUSH			
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE
INF-1	12/12	11:20	Q	H <sub>2</sub> O	*
EFF-1	11	4	Q	H <sub>2</sub> O	*
C-1	11	7	Q	H <sub>2</sub> O	*
INF-1	11	7	Q	H <sub>2</sub> O	*
EFF-1	11	7	Q	H <sub>2</sub> O	*
ASE	11	7	Q	H <sub>2</sub> O	*
REMARKS					
Identify for removal of chitosan					
Two weeks turnaround					

RELINQUISHED BY: (Signature)	LEVINE-FRICKE 190 Powell St FL 629 Oakland Avenue Emeryville, CA	DATE: 12/12/88	TIME: 11:20	RECEIVED BY: (Signature)	Jancy Blake	DATE: 12/12/88	TIME: 4:05 pm
RELINQUISHED BY: (Signature)		DATE	TIME	RECEIVED BY: (Signature)		DATE	TIME
RELINQUISHED BY: (Signature)		DATE	TIME	RECEIVED BY: (Signature)		DATE	TIME
METHOD OF SHIPMENT: DHL Courier Services		DATE	TIME	LAB COMMENTS:			

Sample Collector: 190 Powell St FL 629 Oakland Avenue Emeryville, CA	Lab Copy (White)	File Copy (Green)	File Copy (Yellow)	Field Copy (Pink)
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FORM NO. 86/COC/ARF

# Clayton Environmental Consultants, Inc.

P.O. Box 9019 • 1252 Quarry Lane • Pleasanton, CA 94566 • (415) 426-2600

January 11, 1989

Mr. Fred Moss  
LEVINE-FRICKE  
1900 Powell St.  
Emeryville, CA 94608

Client Ref. No.: 1047  
Lab Batch No.: 8812178  
Clayton Project No.: 21040.00  
Client Code No.: 0214

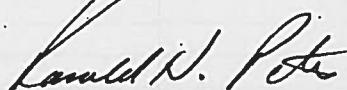
Dear Mr. Moss:

Attached is our analytical laboratory report for the samples received on December 27, 1988. A copy of the Chain of Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be retained at our facility for approximately 30 days after the date of this report, unless you have requested otherwise.

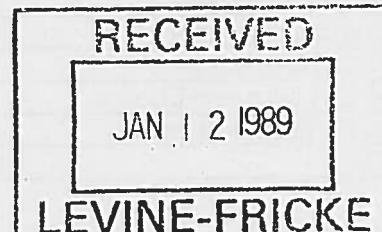
We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Client Services at (415) 426-2657.

Sincerely,



Ronald H. Peters, CIH  
Manager, Laboratory Services

RHP/ewq  
Attachment



**EPA METHOD 601**  
**PURGEABLE HALOCARBONS**

Sample I.D.:	INF-1	Client:	LEVINE-FRICKE
Sample Received:	12/27/88	Client Ref. No.:	1047
Sample Analyzed:	01/09/89	Lab Client Code:	0214
Sample Matrix:	Water	Lab No.:	8812178-01

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<u>Compound</u>	<u>Concentration</u> <u>µg/L (ppb)</u>	<u>Limit of Detection</u> <u>µg/L (ppb)</u>
Chloromethane	ND	3
Bromomethane	ND	4
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	10
1,1-dichloroethene	ND	1
1,1-dichloroethane	ND	2
Trans-1,2-dichloroethene	ND	2
Trans-/Cis-1,2-dichloroethene (Total)	23	2
Chloroform	ND	.2
1,2-dichloroethane	ND	2
1,1,1-trichloroethane	ND	2
Carbon tetrachloride	ND	3
Bromodichloromethane	ND	4
1,2-dichloropropane	ND	2
Cis-1,3-dichloropropene	ND	2
Trichloroethene	500	20
Dibromochloromethane	ND	3
1,1,2-trichloroethane	ND	3
Trans-1,3-dichloropropene	ND	3
2-chloroethylvinylether	ND	5
Bromoform	ND	4
Tetrachloroethene	ND	2
1,1,2,2-tetrachloroethane	ND	2
Chlorobenzene	ND	4
1,3-dichlorobenzene	ND	10
1,2-dichlorobenzene	ND	20
1,4-dichlorobenzene	ND	20
Dichlorodifluoromethane	ND	20
Trichlorofluoromethane	ND	2
Freon 113	ND	3

ND = Not detected at or above limit of detection

**EPA METHOD 601**  
**PURGEABLE HALOCARBONS**

Sample I.D.:	EFF-1	Client:	LEVINE-FRICKE
Sample Received:	12/27/88	Client Ref. No.:	1047
Sample Analyzed:	01/05/89	Lab Client Code:	0214
Sample Matrix:	Water	Lab No.:	8812178-02

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<u>Compound</u>	<u>Concentration</u> µg/L (ppb)	<u>Limit of Detection</u> µg/L (ppb)
Chloromethane	ND	0.6
Bromomethane	ND	0.7
Vinyl chloride	ND	0.5
Chloroethane	ND	0.5
Methylene chloride	ND	2
1,1-dichloroethene	ND	0.2
1,1-dichloroethane	ND	0.4
Trans-1,2-dichloroethene	ND	0.4
Trans-/Cis-1,2-dichloroethene (Total)	ND	0.4
Chloroform	ND	0.5
1,2-dichloroethane	ND	0.3
1,1,1-trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.6
Bromodichloromethane	ND	0.7
1,2-dichloropropane	ND	0.5
Cis-1,3-dichloropropene	ND	0.5
Trichloroethene	ND	0.3
Dibromochloromethane	ND	0.6
1,1,2-trichloroethane	ND	0.6
Trans-1,3-dichloropropene	ND	0.6
2-chloroethylvinylether	ND	1
Bromoform	ND	0.7
Tetrachloroethene	ND	0.5
1,1,2,2-tetrachloroethane	ND	0.5
Chlorobenzene	ND	0.7
1,3-dichlorobenzene	ND	2
1,2-dichlorobenzene	ND	4
1,4-dichlorobenzene	ND	4
Dichlorodifluoromethane	ND	1
Trichlorofluoromethane	ND	0.4
Freon 113	ND	0.6

ND = Not detected at or above limit of detection

**EPA METHOD 601**  
**PURGEABLE HALOCARBONS**

Sample I.D.:	Method Blank	Client:	LEVINE-FRICKE
Sample Received:		Client Ref. No.:	1047
Sample Analyzed:	01/05/89	Lab Client Code:	0214
Sample Matrix:	Water	Lab No.:	8812178-MB

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<u>Compound</u>	<u>Concentration</u> <u>µg/L (ppb)</u>	<u>Limit of Detection</u> <u>µg/L (ppb)</u>
Chloromethane	ND	0.6
Bromomethane	ND	0.7
Vinyl chloride	ND	0.5
Chloroethane	ND	0.5
Methylene chloride	ND	2
1,1-dichloroethene	ND	0.2
1,1-dichloroethane	ND	0.4
Trans-1,2-dichloroethene	ND	0.4
Trans-/Cis-1,2-dichloroethene (Total)	ND	0.4
Chloroform	ND	0.5
1,2-dichloroethane	ND	0.3
1,1,1-trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.6
Bromodichloromethane	ND	0.7
1,2-dichloropropane	ND	0.5
Cis-1,3-dichloropropene	ND	0.5
Trichloroethene	ND	0.3
Dibromochloromethane	ND	0.6
1,1,2-trichloroethane	ND	0.6
Trans-1,3-dichloropropene	ND	0.6
2-chloroethylvinylether	ND	1
Bromoform	ND	0.7
Tetrachloroethene	ND	0.5
1,1,2,2-tetrachloroethane	ND	0.5
Chlorobenzene	ND	0.7
1,3-dichlorobenzene	ND	2
1,2-dichlorobenzene	ND	4
1,4-dichlorobenzene	ND	4
Dichlorodifluoromethane	ND	1
Trichlorofluoromethane	ND	0.4
Freon 113	ND	0.6

ND = Not detected at or above limit of detection

## **INORGANIC LABORATORY ANALYSES**

Sample I.D.:	See below	Client:	LEVINE-FRICKE
Sample Received:	12/27/88	Client Ref. No.:	1047
Sample Analyzed:	01/06/89	Lab Client Code:	0214
Sample Matrix:	Water	Lab No.:	8812178

**Limit of detection:**

Method Reference: EPA 160.2

< = less than, below limit of detection

四庫全書

## **CHAIN OF CUSTODY / ANALYSES REQUEST FORM**

**APPENDIX B**

**GROUND-WATER EXTRACTION AND TREATMENT SYSTEM  
FIELD OPERATIONS SHEETS**

**LEVINE•FRICKE**  
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

AIR STRIPPING/CARBON ADSORPTION SYSTEM  
FIELD OPERATIONS SHEET  
HEWLETT PACKARD - 670 East Middlefield Road  
LF 1047

DATE	INITIALS	TIME	(gpm) FLOWRATE INSTANT- ANEOUS P1	(gpm) FLOWRATE INSTANT- ANEOUS P2	(gallons) FLOW TOTALIZER P2	(gpm) FLOWRATE* OVERALL P2	INFLOW PH	AIR STRIPPER EFFLUENT PH	FINAL EFFLUENT PH	(psi) FILTERS INLET PRESSURE	(psi) CARBON INLET PRESSURE	(psi) CARBON OUTLET PRESSURE	NOTES
9/30		6:55											
10/1	RHW	0700	Ø	Ø	985810		6.0			Ø	2	Ø	
10/3	RHW	0710	24.1 Ø	Ø	996800	3.8	6.0			Ø	2	Ø	
10/4	RHW	0640	23.3 Ø	Ø	1001840	3.6	6.0			Ø	2	Ø	
10/5	RHW	0645	24.0 Ø	Ø	1007730	4.08	6.0			Ø	2	Ø	
10/6	RHW	0643	25.0 Ø	20	1015350	3.42	5.9			2	2	Ø	
10/7	RHW	0655	24.2 Ø	-	1017810	3.57	6.0 <sup>6.02</sup>	7.59	7.45	Ø	2	Ø	Samples TO LAB
10/10	RHW	0648	21.9 Ø	Ø	1033260	3.58	6.0	7.61	7.48	Ø	2	Ø	Gen. Sys. open OK ! SEE AC. <1>
10/11	RHW	0700	24.3 Ø	20	- 1050560	11.76	6.0			2	2	Ø	
10/12	RHW	0750	24.1 17	20	1070750	13.44	6.0			3	2	Ø	
10/13	RHW	0703	24.5 17	20	1089820	13.79	6.0			3	2.5	Ø	
10/14	RHW	0703	24 16	20	1108500	12.97	6.0			3	2.5	Ø	ACID delivery
10/17	RHW	0750	24.7 16	Ø	1163690	12.69	6.0			Ø	2	Ø	
10/18	RHW	0648	22.58 7	20	1181510	13.15	5.9 <sup>5.6</sup>	7.11	6.6	3.5	2	Ø	DO EFF 7 TEMP 24°C
10/19	RHW	0650	24.0 16	20	- 1192490	11.78	6.0	7.54	6.75	4	2	Ø	
10/20	RHW	0645	23.55 Ø	Ø	1215130	11.77	5.9			Ø	2	Ø	
10/21	RHW	0658	23.43 16	Ø	1231380	11.56	6.0			Ø	2	Ø	
10/24	RHW	0650	21.48 7	Ø	1280710	11.50	6.0 <sup>5.05</sup>	7.53	6.92	Ø	2	Ø	SAMPLES TO LAB
10/25	RHW	0700	24.1 7	20	1298520	12.32	6.0 <sup>5.27</sup>	7.80	7.19	5	2	Ø	CHK SY open -OK
10/26	RHW	0445	21.45 Ø	Ø	1313120	11.34	6.0	7.84	7.45	Ø	2	Ø	
10/27	RHW	0442	23.51 15	20	1329560	11.62	6.0	7.59	7.30	5	2	Ø	
10/28	RHW	0445	24.03 16	Ø	1347240	12.25	6.1	7.61	7.29	Ø	2	Ø	
10/31	RHW	0438	21.55 16	20	1394440	10.99	5.9	7.41	7.20	6	3	Ø	

LF1047JUN88MK

$$\text{FLOWRATE OVERALL} = \frac{\Delta \text{ FLOW TOTALIZER (gallons)}}{\Delta \text{ TIME (hrs)}} \times \frac{1}{60}$$

Month: Oct 88

LF1047JUN88MK

**NOTE:** Flowrate for wells represent instantaneous flowmeter reading at time of recording. If no flow is indicated well was not operating at time of recording.

Month: oct 88

### **ADDITIONAL COMMENTS**

DATE	INITIALS	TIME AM	(gpm) FLOWRATE INSTANT- ANEOUS P1	(gpm) FLOWRATE INSTANT- ANEOUS P2	(gallons) FLOW TOTALIZER P2	(gpm) FLOWRATE* OVERALL P2	INFLUENT pH	AIR STRIPPER EFFLUENT pH	FINAL EFFLUENT pH	(psi) FILTERS INLET PRESSURE	(psi) CARBON INLET PRESSURE	(psi) CARBON OUTLET PRESSURE	NOTES
10.31		4.38			1394440								
11/1	KLW	0442 <sup>24.04</sup>	16	Ø	1408460	9.72	5.9	7.54	7.93	Ø	2	Ø	Gen Sys oper. OK
11/2	RHW	0438 <sup>23.56</sup>	Ø	Ø	1421350	9.11	6.0	7.57	7.22	Ø	2	Ø	
11/3	RHW	0440 <sup>24.02</sup>	Ø	Ø	1433960	8.68	6.0	7.62	7.38	Ø	2	Ø	
11/4	RHW	0439 <sup>23.48</sup>	Ø	Ø	1445970	8.52	6.0	7.66	7.34	Ø	2	Ø	
11/7	RHW	0437 <sup>24.11</sup>	Ø	Ø	1481660	8.27	6.0	7.28	7.05	Ø	2	Ø	
11/8	RHW	0435 <sup>23.58</sup>	15	19	1495480	9.76	6.0	7.36	7.10	7	2	Ø	
11/9	RHW	0443 <sup>24.08</sup>	Ø	20	1511330	10.97	5.9	7.42	7.16	7	2	Ø	
11/10	RHW	0438 <sup>23.55</sup>	15	20	1526610	10.81	6.0	7.61	7.15	7	2	Ø	<SAMPLES TO LAB> (S+4)
11/11	RHW	0440 <sup>24.02</sup>	16	20	1541980	10.66	6.0	7.52	7.21	7	2	Ø	Gen Sys. oper. OK (D12)
11/14	RHW	0442 <sup>24.02</sup>	16	19	1586010	10.19	5.9	7.36	6.97	7.5	2	Ø	
11/15	RHW	0645 <sup>26.03</sup>	16	Ø	1601730	10.06	6.0	7.35	7.16	7.5	2	Ø	
11/16	RHW	0701 <sup>24.15</sup>	Ø	Ø	1616400	10.12	6.0	7.43	6.96	Ø	2	Ø	
11/17	RHW	0655 <sup>23.55</sup>	15	19	1628370	8.47	6.1	7.28	7.20	7.5	2	Ø	<SAMPLES TO LAB> DO.EFF 7. tem 16.1°C (S+4)
11/18	RHW	0658 <sup>24.03</sup>	Ø	Ø	1639220	7.52	6.0	7.35	7.16	Ø	2	Ø	
11-22		1.20 PM			1685000	7.46							
11-23		7.45 AM	18.25		1693240	7.52							
11/28	KHF	0705 <sup>19.28</sup>	18	Ø	1746000	7.46	6.0	7.54	7.16	Ø	2	Ø	
11/29	KHF	1055 <sup>27.30</sup>	19	Ø	1761660	9.12	5.9	7.57	7.11	Ø	2	Ø	
11/30	RHW	0700 <sup>19.51</sup>	Ø	Ø	1773170	9.81	6.0	7.24	7.04	Ø	2	Ø	

LF1047JUN88MK

**NOTE:** Flowrate for wells represent instantaneous flowmeter reading at time of recording. If no flow is indicated well was not operating at time of recording.

Month: NOV 88

#### **ADDITIONAL COMMENTS**

**LEVINE-FRICKE**  
 CONSULTING ENGINEERS AND HYDROGEOLOGISTS

DATE	INITIALS	TIME	(gpm) FLOWRATE INSTANT- ANEOUS P1	(gpm) FLOWRATE INSTANT- ANEOUS P2	(gallons) FLOW TOTALIZER	(gpm) FLOWRATE* OVERALL P2	INFLUENT pH	AIR STRIPPER EFFLUENT pH	FINAL EFFLUENT pH	(psi) FILTERS INLET PRESSURE	(psi) CARBON INLET PRESSURE	(psi) CARBON OUTLET PRESSURE	NOTES
11-30		7:00 AM			1773170								
12/1/88	RHD	7:15 <sup>21.15</sup>	17	19	1787300	9.75	6.0	7.23	6.85				
12/2/88	RHD	7:10 <sup>20.55</sup>	17	19	1800840	9.58	6.0	6.98	6.94				
12/5/88	RHD	7:15 <sup>20.5</sup>	φ	4	1834870	7.87	6.0	7.03	6.81				
12/6/88	RHD	0705 <sup>29.55</sup>	φ	20	1846040	7.90	6.0	7.09	6.90	φ	φ	φ	
12/7/88	RHD	0700 <sup>23.05</sup>	16	20	1857030	7.77	5.9	7.12	6.88	10	2	φ	
12/8/88	RHD	0700 24	φ	φ	1860630	2.5	5.9	6.72	6.61	φ	φ	φ	SEE H.C. <1>
12/9/88	RHD	0825 <sup>25.25</sup>	φ	φ	1861230	.39	6.0			φ	φ	φ	
12-12	RHD	0720 <sup>70.55</sup>	φ	φ	1862230	.23	6.0			φ	φ	φ	Samples To LAB (monthly & quarterly).
12-13	RHD	0715 <sup>20.55</sup>	φ	19	1863360	.79	6.0	7.36		11	3	φ	CLIB + C16RN pH probe
12/14	RHD	0808 <sup>24.53</sup>	φ	φ	1864590	.83	6.0			φ	φ	φ	
12/15	RHD	0855 <sup>22.57</sup>	φ	φ	1865310	.53	6.0			φ	φ	φ	
12/16	RHD	0700 <sup>24.05</sup>	φ	φ	1866410	.76	6.0			φ	φ	φ	
12/19/88	RHD	0838 <sup>23.88</sup>	φ	φ	1869400	.68	6.0			φ	φ	φ	
12/20	RHD	0855 <sup>24.17</sup>	φ	φ	1870150	.51	6.0			φ	φ	φ	
12/21	RHD	0710 <sup>22.05</sup>	φ	φ	1871280	.85	6.0			φ	φ	φ	
12/22	RHD	1055 <sup>24.45</sup>	φ	φ	1872410	.68	5.9			φ	φ	φ	DO-EFF 5 Temp 8°C
12/24	RHD	0712 <sup>11.07</sup>	φ	φ	1876950	.65	5.9			φ	φ	φ	Samples To LAB > SEE H.C. <5>
12/28	RHD	0650 <sup>23.36</sup>	φ	φ	1877320	.26	6.0			φ	φ	φ	
12/29	RHD	0730 <sup>24.20</sup>	φ	φ	1878130	.55	5.9			φ	φ	φ	
12/30	RHD	0730 <sup>24</sup>	φ	φ	1879270	.79	6.0			φ	φ	φ	

$$\text{FLOWRATE OVERALL} = \frac{\Delta \text{FLOW TOTALIZER (gallons)}}{\Delta \text{TIME (hrs.)}} \times \frac{1}{60}$$

# LEVINE•FRICKE

CONSULTING ENGINEERS AND HYDROGEOLOGISTS

**WELL EXTRACTION SYSTEM FIELD OPERATIONS SHEET**  
**HEWLETT PACKARD - 670 East Middlefield Road**  
**LF 1047**

LF1047JUN88MK

**NOTE:** Flowrate for wells represent instantaneous flowmeter reading at time of recording. If no flow is indicated well was not operating at time of recording.

Month: December 88

**ADDITIONAL COMMENTS**

DATE	COMMENTS
17 12.8	E-5; OFF LINE shorted LEAD on motor ; E-6; NOT Pumping - STARTER HAS SHORTED CAPACITOR.
27 12.12	E-5 has short in Field wire to pump - Short located on roof; E-6 is ALSO shorted to ground on roof.
30 12.12	DO. CROCK 8 Temp 14.1° PH 7.56 SAMPLES TO LAB (monthly) (Duthly)
24 12.13	E#6 OFF LINE motor NOT good.
15 12.22	TAC TSS sample quarry : Found sys OFF line 12.15 - ; WATER in A.S.T. GENEZ CTRL BOX ; DRAIN water & dry - Re-start OK (co2)

**LEVINE • FRICKE**  
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

**SOIL-GAS EXTRACTION**  
HEWLETT PACKARD - 670 East Middlefield Road  
LF 1047

Date	Time	TEMPERATURE, °C		VACUUM (inches water)	PRESSURE (inches water)	AIR FLOW, cfm		FIELD SAMPLING RESULTS (ppm)				COMMENTS
		Before Bleed	After Blower	Before Bleed	After Blower	Before Bleed	After Blower	SG	AB	BC	AD	
12-8	12:20	17	50	13	44			127	49	-1	Ø	sys back on-line; Motor Amps 7.75
12-12	72%		44		34			88	14.9	-1	-1	
12-13	100%	17	50	19	44							
12-22	12 10/	17	52					26	45	Ø	Ø	Drain water!
12-23	130%	-	-	19	43							Drain water & weather caused inaccurate + T.I.P Readings
12-28	12 15	12	33	20	42			73	29.5	-5	-1.4	DRAIN WATER

Sample Code: SG = Soil Gas before Bleed Line; AB = After Blower;  
BC = Between Canisters; AD = Air Discharge

Month: Dec 88'

**APPENDIX C**

**GROUND-WATER SAMPLING**

**LABORATORY ANALYSIS RESULTS**



November 7, 1988

Levine & Fricke  
1900 Powell Street, 12th Floor  
Emeryville, CA 94608

Attention: Mr. John Faustini

Subject: Report of Data - Case Number 2496

Dear Mr. Faustini:

The technical staff at CHEMWEST is pleased to provide our report for the analysis you requested: Volatile Organics - EPA Method 8240.

Eighteen water samples for Project H.P. Logue, Project Number 1036 were received ~~October 21, 1988~~ in good condition. Results of the analysis along with the analytical methodology and appropriate reporting limits are presented on the following page(s).

Thank you for choosing CHEMWEST Laboratories. Should you have questions concerning this data report or the analytical methods employed, please do not hesitate to contact Toni Weeks, our Technical Service Representative or your project manager. We hope that you will consider CHEMWEST Laboratories for your future analytical support and service requirements.

Sincerely,

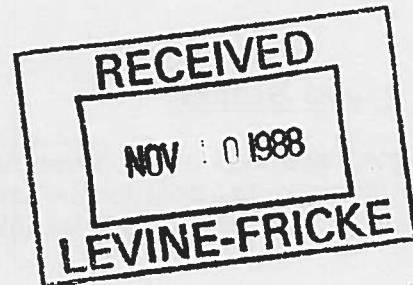
*Jill B. Henes*  
Jill B. Henes, Ph.D.  
Vice President of Technical Services

and

*Kirk Pocan*  
Kirk Pocan  
Project Manager

KP:ds

cc: Joel Bird, President  
File



## ANALYTICAL METHODOLOGY

### Volatile Organics

The analytical techniques used for water and soil analysis are based on EPA Methods 624 and 8240 (Purgeables) and follow EPA Contract Laboratory Program (CLP) recommendations. Water and soil samples are analyzed by a purge and trap, packed column GC/MS technique. The samples are analyzed under full scan GC/MS which monitors a mass range of 35-260.

#### Water -

A 5 ml sample volume to which 3 internal standards and 3 surrogates are added and purged with helium at ambient temperature. The sample is collected on a Tenax silica gel trap and then desorbed onto a packed column.

#### Soil/Sludge: Low -

A 5 gram sample weight is added to 5 mls of reagent water containing 3 internal standards and 3 surrogates and purged with helium at 40°C.

#### Soil/Sludge: Medium -

A 5 gram sample is weighed into a QA/QC prepped VOA vial and then shaken with 10 ml methanol. A 100 ul portion of the methanolic extract is combined with 5 ml of water. Surrogates and internal standards are added, and the sample analysis then follows the water protocol.

The 5 gram samples used for analysis are a mix taken from the top, middle and bottom of the sample container. This mix was used to ensure that the analysis represented an accurate analysis of a non-homogenous soil/sludge sample.

### Tuning and Blanks

The samples are run after meeting GC/MS hardware tuning ion abundance criteria, using p-Bromofluorobenzene (BFB) for volatiles. Laboratory blanks are run each day and a trip blank is also analyzed.

Surrogates:

Surrogates were included in all samples. Surrogates are used to monitor extractions recovery efficiency.

Compounds	% EPA Allowable Recovery	
	Water	Soil
1,2-Dichloroethane-d4	76 - 114	70 - 121
Toluene-d8	88 - 110	81 - 117
4-Bromofluorobenzene	86 - 115	74 - 121

Matrix Spikes:

Matrix spikes are additional quality assurance controls. Known amounts of selected compounds are added to samples and analytical accuracy is determined by sample analysis.

Matrix Spike Compounds	% EPA Allowable Recovery	
	Water	Soil
1,1-Dichloroethane	61 - 145	59 - 172
Trichloroethene	71 - 120	62 - 137
Chlorobenzene	75 - 130	60 - 133
Toluene	76 - 125	59 - 139
Benzene	76 - 127	66 - 142

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W11  
Date(s) Analyzed: 11/03/88

CHEMWEST I.D.: 2496-1  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	18	5
1,1-Dichloroethane	45	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	22	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	4.3*	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	8.9	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	87%	76-114%
Toluene-d8	92%	88-110%
4-Bromofluorobenzene	103%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

\*: Estimated Value detected below reporting limits.

Approved by: Jm

CHEMWEST ANALYTICAL LABORATORIES, INC.

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W12  
Date(s) Analyzed: 11/03/88

CHEMWEST I.D.: 2496-2  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	3.1*	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	9.5	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	91%	76-114%
Toluene-d8	98%	88-110%
4-Bromofluorobenzene	97%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

\*: Estimated Value detected below reporting limits.

Approved by: A\

CHEMWEST ANALYTICAL LABORATORIES, INC.

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W13  
Date(s) Analyzed: 11/02/88

CHEMWEST I.D.: 2496-3  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	100
Bromomethane	BRL	100
Vinyl Chloride	BRL	100
Chloroethane	BRL	100
Methylene Chloride	BRL	100
Acetone	BRL	200
Carbon Disulfide	BRL	50
1,1-Dichloroethene	64	50
1,1-Dichloroethane	140	50
1,2-Dichloroethene (total)	BRL	50
Chloroform	BRL	50
1,2-Dichloroethane	BRL	50
2-Butanone	BRL	200
1,1,1-Trichloroethane	BRL	50
Carbon Tetrachloride	BRL	50
Vinyl Acetate	BRL	100
Bromodichloromethane	BRL	50
1,2-Dichloropropane	BRL	50
cis-1,3-Dichloropropene	BRL	50
Trichloroethene	350	50
Benzene	BRL	50
Dibromochloromethane	BRL	50
1,1,2-Trichloroethane	BRL	50
trans-1,3-Dichloropropene	BRL	50
Bromoform	BRL	50
4-Methyl-2-pentanone	BRL	100
2-Hexanone	BRL	100
Tetrachloroethene	BRL	50
1,1,2,2-Tetrachloroethane	BRL	50
Toluene	BRL	50
Chlorobenzene	BRL	50
Ethylbenzene	BRL	50
Styrene	BRL	50
Xylenes (total)	BRL	50

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	79%	76-114%
Toluene-d8	109%	88-110%
4-Bromofluorobenzene	115%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: J

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W14  
Date(s) Analyzed: 11/03/88

CHEMWEST I.D.: 2496-4  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	82%	76-114%
Toluene-d8	91%	88-110%
4-Bromofluorobenzene	102%	86-115%

BRL: Below Reporting Limit.  
RL: Reporting Limit.

Approved by: J

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W17  
Date(s) Analyzed: 11/03/88

CHEMWEST I.D.: 2496-5  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5
Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	82%	76-114%
Toluene-d8	95%	88-110%
4-Bromofluorobenzene	98%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: J

CHEMWEST ANALYTICAL LABORATORIES, INC

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W28  
Date(s) Analyzed: 11/01/88

CHEMWEST I.D.: 2496-6  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	38	5
1,1-Dichloroethane	32	5
1,2-Dichloroethene (total)	3*	5
Chloroform	2.8*	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	40	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	76	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	13	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	87%	76-114%
Toluene-d8	92%	88-110%
4-Bromofluorobenzene	106%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

\*: Estimated value detected below reporting limits.

Approved by: 

CHEMWEST ANALYTICAL LABORATORIES, INC

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W31  
Date(s) Analyzed: 11/01/88

CHEMWEST I.D.: 2496-7  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	1.3*	5
1,2-Dichloroethene (total)	3.2*	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	3.0*	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	26	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	77%	76-114%
Toluene-d8	90%	88-110%
4-Bromofluorobenzene	95%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

\*: Estimated value detected below reporting limits.

Approved by: J

CHEMWEST ANALYTICAL LABORATORIES, INC.

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W33  
Date(s) Analyzed: 11/01/88

CHEMWEST I.D.: 2496-8  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	5.0	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	2.9*	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	78%	76-114%
Toluene-d8	93%	88-110%
4-Bromofluorobenzene	97%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

\*: Estimated value detected below reporting limits.

Approved by: JH

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W34  
Date(s) Analyzed: 11/16/88

CHEMWEST I.D.: 2496-9  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	9.4	5
1,1-Dichloroethane	10	5
1,2-Dichloroethene (total)	11	5
Chloroform	BRL	5
1,2-Dichloroethane	20	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	83	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	6.4	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	99%	76-114%
Toluene-d8	94%	88-110%
4-Bromofluorobenzene	98%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: JW

CHEMWEST ANALYTICAL LABORATORIES, INC

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W35  
Date(s) Analyzed: 11/03/88

CHEMWEST I.D.: 2496-10  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	82%	76-114%
Toluene-d8	93%	88-110%
4-Bromofluorobenzene	97%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: J

CHEMWEST ANALYTICAL LABORATORIES, INC.

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W36  
Date(s) Analyzed: 11/02/88

CHEMWEST I.D.: 2496-11  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	100
Bromomethane	BRL	100
Vinyl Chloride	BRL	100
Chloroethane	130	100
Methylene Chloride	BRL	100
Acetone	BRL	200
Carbon Disulfide	BRL	50
1,1-Dichloroethene	530	50
1,1-Dichloroethane	810	50
1,2-Dichloroethene (total)	BRL	50
Chloroform	BRL	50
1,2-Dichloroethane	BRL	50
2-Butanone	BRL	200
1,1,1-Trichloroethane	BRL	50
Carbon Tetrachloride	BRL	50
Vinyl Acetate	BRL	100
Bromodichloromethane	BRL	50
1,2-Dichloropropane	BRL	50
cis-1,3-Dichloropropene	BRL	50
Trichloroethene	BRL	50
Benzene	BRL	50
Dibromochloromethane	BRL	50
1,1,2-Trichloroethane	BRL	50
trans-1,3-Dichloropropene	BRL	50
Bromoform	BRL	50
4-Methyl-2-pentanone	BRL	100
2-Hexanone	BRL	100
Tetrachloroethene	BRL	50
1,1,2,2-Tetrachloroethane	BRL	50
Toluene	BRL	50
Chlorobenzene	BRL	50
Ethylbenzene	BRL	50
Styrene	BRL	50
Xylenes (total)	BRL	50
Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	90%	76-114%
Toluene-d8	105%	88-110%
4-Bromofluorobenzene	104%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: JL

CHEMWEST ANALYTICAL LABORATORIES, INC.

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W37  
Date(s) Analyzed: 11/03/88

CHEMWEST I.D.: 2496-12  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	89%	76-114%
Toluene-d8	92%	88-110%
4-Bromofluorobenzene	96%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: J

CHEMWEST ANALYTICAL LABORATORIES, INC

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W39  
Date(s) Analyzed: 11/02/88

CHEMWEST I.D.: 2496-13  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	100
Bromomethane	BRL	100
Vinyl Chloride	BRL	100
Chloroethane	BRL	100
Methylene Chloride	BRL	100
Acetone	BRL	200
Carbon Disulfide	BRL	50
1,1-Dichloroethene	46*	50
1,1-Dichloroethane	26*	50
1,2-Dichloroethene (total)	BRL	50
Chloroform	BRL	50
1,2-Dichloroethane	BRL	50
2-Butanone	BRL	200
1,1,1-Trichloroethane	52	50
Carbon Tetrachloride	BRL	50
Vinyl Acetate	BRL	100
Bromodichloromethane	BRL	50
1,2-Dichloropropane	BRL	50
cis-1,3-Dichloropropene	BRL	50
Trichloroethene	44*	50
Benzene	BRL	50
Dibromochloromethane	BRL	50
1,1,2-Trichloroethane	BRL	50
trans-1,3-Dichloropropene	BRL	50
Bromoform	BRL	50
4-Methyl-2-pentanone	BRL	100
2-Hexanone	BRL	100
Tetrachloroethene	930	50
1,1,2,2-Tetrachloroethane	BRL	50
Toluene	BRL	50
Chlorobenzene	BRL	50
Ethylbenzene	BRL	50
Styrene	BRL	50
Xylenes (total)	BRL	50

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	76%	76-114%
Toluene-d8	93%	88-110%
4-Bromofluorobenzene	91%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

\*: Estimated value detected below reporting limits.

Approved by: J

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W40  
Date(s) Analyzed: 11/02/88

CHEMWEST I.D.: 2496-14  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	82%	76-114%
Toluene-d8	92%	88-110%
4-Bromofluorobenzene	92%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

\*: Estimated value detected below reporting limits.

Approved by: J.S.

CHEMWEST ANALYTICAL LABORATORIES, INC.

REV3:9.88



November 16, 1988

Levine & Fricke  
1900 Powell Street, 12th Floor  
Emeryville, CA 94608

Attention: Mr. John Faustini

Subject: Report of Amended Data - Case Number 2496

Dear Mr. Faustini:

Enclosed you will find an amended data sheet for the Volatile Organics Analysis of CHEMWEST sample number 2496-15, your sample number W41.

Project Name: H-P Logue      Project Number 1036

The enclosed data sheet now reflects the correct amount for Trichloroethene, 11 ug/L without the asterick.

I hope that this has not caused you any inconvenience, should you have any further question please do not hesitate to give us a call.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert Hart".

Robert Hart  
Data Control Manager

cc: Joel Bird, President  
File

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W41  
Date(s) Analyzed: 11/02/88

CHEMWEST I.D.: 2496-15  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	24	5
1,1-Dichloroethane	9.0	5
1,2-Dichloroethene (total)	4.0*	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	11	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	430	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	81%	76-114%
Toluene-d8	107%	88-110%
4-Bromofluorobenzene	110%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

\*: Estimated value detected below reporting limits.

Approved by: ew

CHEMWEST ANALYTICAL LABORATORIES, INC.

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W41  
Date(s) Analyzed: 11/02/88

CHEMWEST I.D.: 2496-15  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	24	5
1,1-Dichloroethane	9.0	5
1,2-Dichloroethene (total)	4.0*	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	11*	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	430	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	81%	76-114%
Toluene-d8	107%	88-110%
4-Bromofluorobenzene	110%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

\*: Estimated value detected below reporting limits.

Approved by: J.A.

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W42  
Date(s) Analyzed: 11/02/88

CHEMWEST I.D.: 2496-16  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	18	5
1,1-Dichloroethane	8.2	5
1,2-Dichloroethene (total)	1.4*	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	25	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	75	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	570	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	88%	76-114%
Toluene-d8	89%	88-110%
4-Bromofluorobenzene	104%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

\*: Estimated value detected below reporting limits.

Approved by: *[Signature]*

CHEMWEST ANALYTICAL LABORATORIES, INC.

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W45  
Date(s) Analyzed: 11/03/88

CHEMWEST I.D.: 2496-17  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	3.6*	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	67	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	76%	76-114%
Toluene-d8	89%	88-110%
4-Bromofluorobenzene	87%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

\*: Estimated value detected below reporting limits.

Approved by: J

CHEMWEST ANALYTICAL LABORATORIES, INC

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W40 BLANK  
Date(s) Analyzed: 11/03/88

CHEMWEST I.D.: 2496-18  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	79%	76-114%
Toluene-d8	90%	88-110%
4-Bromofluorobenzene	88%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: JL

REV3:9.88

**QUALITY CONTROL/ASSURANCE SECTION**

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: Method Blank  
Date(s) Analyzed: 11/03/88

CHEMWEST I.D.: 2496-MB  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	96%	76-114%
Toluene-d8	90%	88-110%
4-Bromofluorobenzene	90%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: J

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W14-MS  
Date(s) Analyzed: 11/03/88

CHEMWEST I.D.: 2496-4MS  
Matrix : Water

Compound	Spike Conc. (ug/kg)	% Recovery	Acceptance Window
1,1-Dichloroethene	50	75%	61-145%
Trichloroethene	50	90%	71-120%
Benzene	50	83%	76-127%
Toluene	50	93%	76-125%
Chlorobenzene	50	90%	75-130%

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	80%	76-114%
Toluene-d8	97%	88-110%
4-Bromofluorobenzene	96%	86-115%

Approved by: JH

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W14-MSD  
Date(s) Analyzed: 11/03/88

CHEMWEST I.D.: 2496-4MSD  
Matrix : Water

Compound	Spike Conc. (ug/kg)	% Recovery	Acceptance Window
1,1-Dichloroethene	50	75%	61-145%
Trichloroethene	50	103%	71-120%
Benzene	50	90%	76-127%
Toluene	50	99%	76-125%
Chlorobenzene	50	97%	75-130%

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	98%	76-114%
Toluene-d8	100%	88-110%
4-Bromofluorobenzene	100%	86-115%

Approved by: JN

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Matrix Spike - Matrix Spike Duplicate  
Relative Percent Difference

Compound	% Recovery W14 MS	% Recovery W14 MSD	RPD
1,1-Dichloroethene	75%	75%	0%
Trichloroethene	90%	103%	13%
Benzene	83%	90%	8%
Toluene	93%	99%	6%
Chlorobenzene	90%	97%	7%

Approved by: R

REV3:9.88

CHEM WEST ANALYTICAL LABORATORIES, INC.  
600 West North Market Blvd.  
Sacramento, California 95834  
(916) 923-0840 FAX (916) 923-1938

2496

Order No. \_\_\_\_\_  
Date Rec'd. 10/21/88 @ 1800  
Compl. Date \_\_\_\_\_  
Section Kirk Rocam

CLIENT

CLIENT: Leanne C Frische  
1900 Powell Street, 12<sup>th</sup> Floor  
Emeryville, CA 94608

Project Name: H-P logic

Project No. 1036

P.O. NO. \_\_\_\_\_

Contact \_\_\_\_\_

Phone (415) 652-4500

ANALYSIS: ~~thirty six~~<sup>eighteen</sup> water samples held under chain  
of custody in 40ml vqa vials (36) to be analyzed  
for Halogenated Volatile Organics (HOI). (8240)

John Faustini Requested 8240's instead of 601's on 10/25/88

24/10/88	Sample ID	Date	Time	analysis	Matrix	Container
10/21/88	W11	10/20	4:35	2001	water	2-40ml vqa
	-2 W12	10/19	5:20			
	-3 W13	"	10:15			
	-4 W14	10/21	11:00			
	-5 W17	"	12:30			
	-6 W28	"	10:10			
	-7 W31	10/20	5:00			
	-8 W33	10/21	4:30			
	-9 W34	10/20	8:00			
	-10 W35	"	3:20			
	-11 W36	10/21	8:40			
	-12 W37	10/20	1:30			
	-13 W39	"	10:05			
	-14 W40	"	10:50			
	-15 W41	"	9:15			
	-16 W42	"	8:25			
	-17 W45	"	2:05			
	-18 W40 blank	"	10:30			

GC  
H.T. MICHELLE TOLIVER

ChemWest Courier

## Claim or Custody Record

**ANALYTICAL LABORATORIES, INC.**

C'EMWEST

ANALYTICAL LABORATORIES, INC.

## Chair of Custody Record



November 11, 1988

Levine & Fricke  
1900 Powell Street, 12th Floor  
Emeryville, CA 94608

Attention: Mr. John Faustini

Subject: Report of Data - Case Number 2529

Dear Mr. Faustini:

The technical staff at CHEMWEST is pleased to provide our report for the analysis you requested: Volatile Organics - EPA Method 8240.

Ten water samples for Project HP-Logue Ave., Project Number 1036 were received October 26, 1988 in good condition. Results of the analysis along with the analytical methodology and appropriate reporting limits are presented on the following page(s).

Thank you for choosing CHEMWEST Laboratories. Should you have questions concerning this data report or the analytical methods employed, please do not hesitate to contact Toni Weeks, our Technical Service Representative or your project manager. We hope that you will consider CHEMWEST Laboratories for your future analytical support and service requirements.

Sincerely,

A handwritten signature in black ink that appears to read "Jill B. Henes".

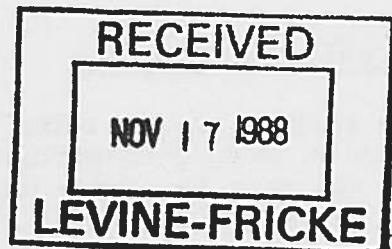
Jill B. Henes, Ph.D.  
Vice President of Technical Services

and Kirk Pocan  
Project Manager

A handwritten signature in black ink that appears to read "Kirk Pocan".

KP:ds

cc: Joel Bird, President  
File



## ANALYTICAL METHODOLOGY

### Volatile Organics

The analytical techniques used for water and soil analysis are based on EPA Methods 624 and 8240 (Purgeables) and follow EPA Contract Laboratory Program (CLP) recommendations. Water and soil samples are analyzed by a purge and trap, packed column GC/MS technique. The samples are analyzed under full scan GC/MS which monitors a mass range of 35-260.

#### Water -

A 5 ml sample volume to which 3 internal standards and 3 surrogates are added and purged with helium at ambient temperature. The sample is collected on a Tenax silica gel trap and then desorbed onto a packed column.

#### Soil/Sludge: Low -

A 5 gram sample weight is added to 5 mls of reagent water containing 3 internal standards and 3 surrogates and purged with helium at 40°C.

#### Soil/Sludge: Medium -

A 5 gram sample is weighed into a QA/QC prepped VOA vial and then shaken with 10 ml methanol. A 100 ul portion of the methanolic extract is combined with 5 ml of water. Surrogates and internal standards are added, and the sample analysis then follows the water protocol.

The 5 gram samples used for analysis are a mix taken from the top, middle and bottom of the sample container. This mix was used to ensure that the analysis represented an accurate analysis of a non-homogenous soil/sludge sample.

### Tuning and Blanks

The samples are run after meeting GC/MS hardware tuning ion abundance criteria, using p-Bromofluorobenzene (BFB) for volatiles. Laboratory blanks are run each day and a trip blank is also analyzed.

Surrogates:

Surrogates were included in all samples. Surrogates are used to monitor extractions recovery efficiency.

Compounds	% EPA Allowable Recovery	
	Water	Soil
1,2-Dichloroethane-d4	76 - 114	70 - 121
Toluene-d8	88 - 110	81 - 117
4-Bromofluorobenzene	86 - 115	74 - 121

Matrix Spikes:

Matrix spikes are additional quality assurance controls. Known amounts of selected compounds are added to samples and analytical accuracy is determined by sample analysis.

Matrix Spike Compounds	% EPA Allowable Recovery	
	Water	Soil
1,1-Dichloroethane	61 - 145	59 - 172
Trichloroethene	71 - 120	62 - 137
Chlorobenzene	75 - 130	60 - 133
Toluene	76 - 125	59 - 139
Benzene	76 - 127	66 - 142

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W 8A  
Date(s) Analyzed: 11/07/88

CHEMWEST I.D.: 2529-1  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	110	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	97%	76-114%
Toluene-d8	110%	88-110%
4-Bromofluorobenzene	110%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: ew

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W 8A Blank  
Date(s) Analyzed: 11/07/88

CHEMWEST I.D.: 2529-2  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	76%	76-114%
Toluene-d8	95%	88-110%
4-Bromofluorobenzene	88%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: EW

CHEMWEST ANALYTICAL LABORATORIES, INC.

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W 15  
Date(s) Analyzed: 11/07/88

CHEMWEST I.D.: 2529-3  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	97%	76-114%
Toluene-d8	110%	88-110%
4-Bromofluorobenzene	107%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: su

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W 7  
Date(s) Analyzed: 11/07/88

CHEMWEST I.D.: 2529-4  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	19	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	6.7	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	14	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	98%	76-114%
Toluene-d8	105%	88-110%
4-Bromofluorobenzene	108%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: gw

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W 16  
Date(s) Analyzed: 11/07/88

CHEMWEST I.D.: 2529-5  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	22	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	500	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5
<hr/>		
Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	108%	76-114%
Toluene-d8	109%	88-110%
4-Bromofluorobenzene	107%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: lw

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W 18  
Date(s) Analyzed: 11/07/88

CHEMWEST I.D.: 2529-6  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	21	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	80%	76-114%
Toluene-d8	95%	88-110%
4-Bromofluorobenzene	95%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: JW

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W 1  
Date(s) Analyzed: 11/07/88

CHEMWEST I.D.: 2529-7  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	6.0	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	33	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	105%	76-114%
Toluene-d8	107%	88-110%
4-Bromofluorobenzene	113%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: ew

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: TRIP BLANK  
Date(s) Analyzed: 11/10/88

CHEMWEST I.D.: 2529-8  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	107%	76-114%
Toluene-d8	106%	88-110%
4-Bromofluorobenzene	103%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: ew

REV3:9.88

CHEM WEST ANALYTICAL LABORATORIES, INC.  
600 West North Market Blvd.  
Sacramento, California 95834  
(916) 923-0840 FAX (916) 923-1938

# CLIENT

2529  
Order No.  
Date Rec'd. 10/26/88 @ 1255  
Compl. Date  
Section Bulk Poran

CLIENT: Lerrino & Frische  
1900 Powell Street, 12th Floor  
Emeryville, CA 94108

Project Name: HP Liquid Aze

Project No. 1036

P.O. NO.

Contact

Phone (415) 652 - 4500

ANALYSIS: Seven water samples rec'd under chain of custody  
in lot amber glass bottles (1) and 40ml vycor vials (18). To  
be analyzed for 624, 8240 and 604.

	Sampled	Date	Time	Analysis	Matrix	Containers
2529-1	W2A	10/25	1015	8240	water	2 - 40ml vycor vials
-2	W2A Blank		1015	"	"	2 - " "
-3	W15		1050	"	"	2 - " "
-4	W7		12:15	"	"	2 - " "
-5	W16		11:45	"	"	2 - " "
-6	W18		1350	"	"	2 - " "
-7	W1		1450	"	"	2 - " "
-8	Trip Blank		0930	624, 8240, 604	"	5-containers

GC, RI

M.T. MICHELLE TOLIVER

Chem West Courses

## **CHAIN OF CUSTODY / ANALYSES REQUEST FORM**

Project No.: 1036		Field Logbook No.: Project Location: Mountain View		Date: 10/25/88	Serial No.: N# 4041
Project Name: HP logic for Chambers		Sampler (Signature): (and) Chambers		Samplers: JDC RWB	
SAMPLES		ANALYSES		REMARKS	
SAMPLE NO.	DATE	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	
W8A	10/25	10:15	2	Y/NAS W/Run	X
W8A Blank	10/25	10:15	2	Y/NAS W/Run	X
W15	.	10:50	2	Y/NAS W/Run	X
W7	.	12:15	2	Y/NAS W/Run	X
W16	.	11:45	2	Y/NAS W/Run	X
W18	.	13:50	2	Y/NAS W/Run	X
W1	10/26	14:50	2	Y/NAS W/Run	X
trip Blank	10/26	1:30	2	Y/NAS W/Run	X
trip Blank	10/26	9:30	2	Y/NAS W/Run	X
trip Blank	10/26	9:30	2	Y/NAS W/Run	X

REL INQUISHED BY: (Signature)	DATE: 10/26/88	TIME: 01:00	RECEIVED BY: (Signature)	DATE: 10/26/88	TIME: 14:05
REL INQUISHED BY: (Signature)	DATE: 10/26/88	TIME: 18:55	RECEIVED BY: (Signature)	DATE: 10/26/88	TIME: 18:55
REL INQUISHED BY: (Signature)	DATE: 10/26/88	TIME: 18:55	RECEIVED BY: (Signature)	DATE: 10/26/88	TIME: 18:55
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE	629 Oakland Avenue - 1st Floor #12A	Chum West
REL INQUISHED BY: (Signature)	DATE: 10/26/88	TIME: 14:05
REL INQUISHED BY: (Signature)	DATE: 10/26/88	TIME: 18:55
REL INQUISHED BY: (Signature)	DATE: 10/26/88	TIME: 18:55
METHOD OF SHIPMENT:	DATE	TIME



November 11, 1988

Levine & Fricke  
1900 Powell Street, 12th Floor  
Emeryville, CA 94608

Attention: Mr. John Faustini

Subject: Report of Data - Case Number 2512

Dear Mr. Faustini:

The technical staff at CHEMWEST is pleased to provide our report for the analysis you requested: Volatile Organics - EPA Method 8240.

Ten water samples for Project HP Logue, Project Number 1036 were received October 24, 1988 in good condition. Client Sample I.D. W6B1-Blank, CW# 2512-10 was broken at CHEMWEST, analysis could not be performed on this sample.

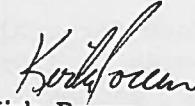
Results of the analysis along with the analytical methodology and appropriate reporting limits are presented on the following page(s).

Thank you for choosing CHEMWEST Laboratories. Should you have questions concerning this data report or the analytical methods employed, please do not hesitate to contact Toni Weeks, our Technical Service Representative or your project manager. We hope that you will consider CHEMWEST Laboratories for your future analytical support and service requirements.

Sincerely,

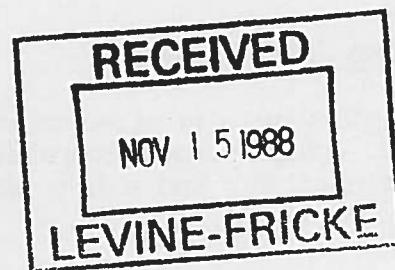
  
Jill B. Henes, Ph.D.  
Vice President of Technical Services

and

  
Kirk Pocan  
Project Manager

KP:ds

cc: Joel Bird, President  
File



## ANALYTICAL METHODOLOGY

### Volatile Organics

The analytical techniques used for water and soil analysis are based on EPA Methods 624 and 8240 (Purgeables) and follow EPA Contract Laboratory Program (CLP) recommendations. Water and soil samples are analyzed by a purge and trap, packed column GC/MS technique. The samples are analyzed under full scan GC/MS which monitors a mass range of 35-260.

#### Water -

A 5 ml sample volume to which 3 internal standards and 3 surrogates are added and purged with helium at ambient temperature. The sample is collected on a Tenax silica gel trap and then desorbed onto a packed column.

#### Soil/Sludge: Low -

A 5 gram sample weight is added to 5 mls of reagent water containing 3 internal standards and 3 surrogates and purged with helium at 40°C.

#### Soil/Sludge: Medium -

A 5 gram sample is weighed into a QA/QC prepped VOA vial and then shaken with 10 ml methanol. A 100 ul portion of the methanolic extract is combined with 5 ml of water. Surrogates and internal standards are added, and the sample analysis then follows the water protocol.

The 5 gram samples used for analysis are a mix taken from the top, middle and bottom of the sample container. This mix was used to ensure that the analysis represented an accurate analysis of a non-homogenous soil/sludge sample.

### Tuning and Blanks

The samples are run after meeting GC/MS hardware tuning ion abundance criteria, using p-Bromofluorobenzene (BFB) for volatiles. Laboratory blanks are run each day and a trip blank is also analyzed.

Surrogates:

Surrogates were included in all samples. Surrogates are used to monitor extractions recovery efficiency.

Compounds	% EPA Allowable Recovery	
	Water	Soil
1,2-Dichloroethane-d4	76 - 114	70 - 121
Toluene-d8	88 - 110	81 - 117
4-Bromofluorobenzene	86 - 115	74 - 121

Matrix Spikes:

Matrix spikes are additional quality assurance controls. Known amounts of selected compounds are added to samples and analytical accuracy is determined by sample analysis.

Matrix Spike Compounds	% EPA Allowable Recovery	
	Water	Soil
1,1-Dichloroethane	61 - 145	59 - 172
Trichloroethene	71 - 120	62 - 137
Chlorobenzene	75 - 130	60 - 133
Toluene	76 - 125	59 - 139
Benzene	76 - 127	66 - 142

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W 5A  
Date(s) Analyzed: 11/01/88

CHEMWEST I.D.: 2512-1  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	11	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	11	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	104%	76-114%
Toluene-d8	96%	88-110%
4-Bromofluorobenzene	101%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: ew

CHEMWEST ANALYTICAL LABORATORIES, INC.

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W 5B  
Date(s) Analyzed: 11/05/88

CHEMWEST I.D.: 2512-2  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	81%	76-114%
Toluene-d8	90%	88-110%
4-Bromofluorobenzene	94%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: ew

CHEMWEST ANALYTICAL LABORATORIES, INC

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W 6B1  
Date(s) Analyzed: 11/05/88

CHEMWEST I.D.: 2512-3  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	88%	76-114%
Toluene-d8	90%	88-110%
4-Bromofluorobenzene	98%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: ew

CHEMWEST ANALYTICAL LABORATORIES, INC

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W 6  
Date(s) Analyzed: 11/05/88

CHEMWEST I.D.: 2512-4  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	240	5
1,1-Dichloroethane	340	5
1,2-Dichloroethene (total)	6.2	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	120	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	140	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	1000	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	95%	76-114%
Toluene-d8	95%	88-110%
4-Bromofluorobenzene	90%	86-115%

BRL: Below Reporting Limit.  
RL: Reporting Limit.

Approved by: ew

CHEMWEST ANALYTICAL LABORATORIES, INC

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W 9  
Date(s) Analyzed: 11/05/88

CHEMWEST I.D.: 2512-5  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	100%	76-114%
Toluene-d8	99%	88-110%
4-Bromofluorobenzene	102%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: ew

CHEMWEST ANALYTICAL LABORATORIES, INC

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W 10  
Date(s) Analyzed: 11/05/88

CHEMWEST I.D.: 2512-6  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	110%	76-114%
Toluene-d8	102%	88-110%
4-Bromofluorobenzene	111%	86-115%

BRL: Below Reporting Limit.  
RL: Reporting Limit.

Approved by: ew

CHEMWEST ANALYTICAL LABORATORIES, INC

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W 8B  
Date(s) Analyzed: 11/05/88

CHEMWEST I.D.: 2512-7  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5
Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	93%	76-114%
Toluene-d8	93%	88-110%
4-Bromofluorobenzene	100%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: ew

CHEMWEST ANALYTICAL LABORATORIES, INC

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W 8B1  
Date(s) Analyzed: 11/05/88

CHEMWEST I.D.: 2512-8  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	99%	76-114%
Toluene-d8	106%	88-110%
4-Bromofluorobenzene	109%	86-115%

BRL: Below Reporting Limit.  
RL: Reporting Limit.

Approved by: ew

CHEMWEST ANALYTICAL LABORATORIES, INC.

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W 8B1 Blank  
Date(s) Analyzed: 11/05/88

CHEMWEST I.D.: 2512-9  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	87%	76-114%
Toluene-d8	94%	88-110%
4-Bromofluorobenzene	97%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: lw

CHEMWEST ANALYTICAL LABORATORIES, INC.

REV3:9.88

**QUALITY CONTROL/ASSURANCE SECTION**

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W14-MS  
Date(s) Analyzed: 11/03/88

CHEMWEST I.D.: 2496-4MS  
Matrix : Water

Compound	Spike Conc. (ug/kg)	% Recovery	Acceptance Window
1,1-Dichloroethene	50	75%	61-145%
Trichloroethene	50	90%	71-120%
Benzene	50	83%	76-127%
Toluene	50	93%	76-125%
Chlorobenzene	50	90%	75-130%

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	80%	76-114%
Toluene-d8	97%	88-110%
4-Bromofluorobenzene	96%	86-115%

Approved by: ew

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: W14-MSD  
Date(s) Analyzed: 11/03/88

CHEMWEST I.D.: 2496-4MSD  
Matrix : Water

Compound	Spike Conc. (ug/kg)	% Recovery	Acceptance Window
1,1-Dichloroethene	50	75%	61-145%
Trichloroethene	50	103%	71-120%
Benzene	50	90%	76-127%
Toluene	50	99%	76-125%
Chlorobenzene	50	97%	75-130%

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	98%	76-114%
Toluene-d8	100%	88-110%
4-Bromofluorobenzene	100%	86-115%

Approved by: ew

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Matrix Spike - Matrix Spike Duplicate  
Relative Percent Difference

Compound	% Recovery W14 MS	% Recovery W14 MSD	RPD
1,1-Dichloroethene	75%	75%	0%
Trichloroethene	90%	103%	13%
Benzene	83%	90%	8%
Toluene	93%	99%	6%
Chlorobenzene	90%	97%	7%

Approved by: ew

REV3:9.88

CHEM WEST ANALYTICAL LABORATORIES, INC.  
600 West North Market Blvd.  
Sacramento, California 95834  
(916) 923-0840 FAX (916) 923-1938

2512

Order No.  
Date Rec'd. 10/24/88 01830  
Compl. Date  
Section Kirk Pocan

CLIENT: Ferrino C Fringe  
1900 Powell Street, 12th Floor  
Emeryville, CA 94608

Project Name: Hp Logue

Project No. 1036

P.O. NO.

Contact

Phone (415) 752-4500

ANALYSIS: Ten water samples held under chain of custody in 40ml vials (20) to be analyzed for Volatiles (100).

Sampled	Date	Time	Analysis	Matrix	Container
2512-1	W5A	10/24	0945	1001	Water 2.40ml vials
-2	W5B		0955		
-3	W6B1		2:30		
-4	W6		2:15		
-5	W9		12:00		
-6	W10		11:30		
-7	W9B		8:15		
-8	W8B1		8:10		
-9	W8B1-Blank		8:10		
-10	W6B1-Blank		2:30		

GC

M.T. MICHELLE TOLIVER

ChemWest Courses

**CHAIN OF CUSTODY / ANALYSES REQUEST FORM**

Project No.: 103ic	Field Logbook No.:	Date: 10/24/68	Serial No.: N° 4040			
Project Name: H.P. Coffe	Project Location: Mountain View					
Sampler (Signature) : <i>Jang D. Chankas</i>	ANALYSES					
SAMPLES	HOLD	SH	REMARKS			
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF SAMPLE CONTAINERS	SAMPLE TYPE	
W5A	10/24	9:45	2	water	X	
W5B	"	9:55			X	
W6B1	"	10:30			X	
W6	10/24	10:15			X	one vmt has air bubble
W9	"	12:00			X	
W10	"	11:30			X	
W9B3	"	8:15			X	
W9B1	"	8:10			X	" " "
W9B1-Black	"	8:10			X	
W6B1-Black	"	2:30			X	
					↓	
RELINQUISHED BY: (Signature)	DATE: 10/24/68	TIME: 14:30	RECEIVED BY: <i>Jang D. Chankas</i> (Signature)	DATE: 10/24/68	TIME: 14:30	
RELINQUISHED BY: (Signature)	DATE: 10/24/68	TIME: 14:30	RECEIVED BY: <i>Jang D. Chankas</i> (Signature)	DATE: 10/24/68	TIME: 14:30	
RELINQUISHED BY: (Signature)	DATE: 10/24/68	TIME: 14:30	RECEIVED BY: <i>Michele Blivier</i> (Signature)	DATE: 10/24/68	TIME: 14:30	
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:			
Sample Collector: LEVINE-FRICKE 629-Oakland Avenue 1900 Part II Et Oakland, CA 94611-4567 (415) 652-4500	File Copy (Yellow)	File Copy (Green)	Analytical Laboratory: <i>Chem West</i> <i>Mari Nameko</i>	1st Copy (Pink)	1st Copy (Green)	
Shipping: (White)						



November 4, 1988

Levine & Fricke  
1900 Powell Street, 12th Floor  
Emeryville, CA 94608

Attention: Mr. Don Bradshaw  
Subject: Report of Data - Case Number 2473

Dear Mr. Bradshaw:

The technical staff at CHEMWEST is pleased to provide our report for the analysis you requested: Volatile Organics - EPA Method 624.

Six water samples for Project HP Logue Ave, Project Number 1036 were received October 19, 1988 in good condition. Results of the analysis along with the analytical methodology and appropriate reporting limits are presented on the following page(s).

Thank you for choosing CHEMWEST Laboratories. Should you have questions concerning this data report or the analytical methods employed, please do not hesitate to contact Toni Weeks, our Technical Service Representative or your project manager. We hope that you will consider CHEMWEST Laboratories for your future analytical support and service requirements.

Sincerely,

A handwritten signature in black ink that appears to read "Jill B. Henes".

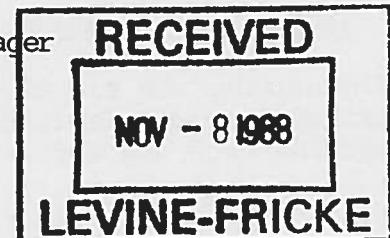
Jill B. Henes, Ph.D.  
Vice President of Technical Services

and

A handwritten signature in black ink that appears to read "Kirk Pocan".  
Kirk Pocan  
Project Manager

KP:ds

cc: Joel Bird, President  
File



## ANALYTICAL METHODOLOGY

### Volatile Organics

The analytical techniques used for water and soil analysis are based on EPA Methods 624 and 8240 (Purgeables) and follow EPA Contract Laboratory Program (CLP) recommendations. Water and soil samples are analyzed by a purge and trap, packed column GC/MS technique. The samples are analyzed under full scan GC/MS which monitors a mass range of 35-260.

#### Water -

A 5 ml sample volume to which 3 internal standards and 3 surrogates are added and purged with helium at ambient temperature. The sample is collected on a Tenax silica gel trap and then desorbed onto a packed column.

#### Soil/Sludge: Low -

A 5 gram sample weight is added to 5 mls of reagent water containing 3 internal standards and 3 surrogates and purged with helium at 40°C.

#### Soil/Sludge: Medium -

A 5 gram sample is weighed into a QA/QC prepped VOA vial and then shaken with 10 ml methanol. A 100 ul portion of the methanolic extract is combined with 5 ml of water. Surrogates and internal standards are added, and the sample analysis then follows the water protocol.

The 5 gram samples used for analysis are a mix taken from the top, middle and bottom of the sample container. This mix was used to ensure that the analysis represented an accurate analysis of a non-homogenous soil/sludge sample.

### Tuning and Blanks

The samples are run after meeting GC/MS hardware tuning ion abundance criteria, using p-Bromofluorobenzene (BFB) for volatiles. Laboratory blanks are run each day and a trip blank is also analyzed.

Surrogates:

Surrogates were included in all samples. Surrogates are used to monitor extractions recovery efficiency.

Compounds	% EPA Allowable Recovery	
	Water	Soil
1,2-Dichloroethane-d4	76 - 114	70 - 121
Toluene-d8	88 - 110	81 - 117
4-Bromofluorobenzene	86 - 115	74 - 121

Matrix Spikes:

Matrix spikes are additional quality assurance controls. Known amounts of selected compounds are added to samples and analytical accuracy is determined by sample analysis.

Matrix Spike Compounds	% EPA Allowable Recovery	
	Water	Soil
1,1-Dichloroethane	61 - 145	59 - 172
Trichloroethene	71 - 120	62 - 137
Chlorobenzene	75 - 130	60 - 133
Toluene	76 - 125	59 - 139
Benzene	76 - 127	66 - 142

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: E-1  
Date(s) Analyzed: 10/26/88

CHEMWEST I.D.: 2473-1  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	5.5	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	12	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	BRL	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	86%	76-114%
Toluene-d8	90%	88-110%
4-Bromofluorobenzene	96%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: ew

CHEMWEST ANALYTICAL LABORATORIES, INC.

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: E-2  
Date(s) Analyzed: 10/26/88

CHEMWEST I.D.: 2473-2  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	BRL	5
1,1-Dichloroethane	2.7*	5
1,2-Dichloroethene (total)	17	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	BRL	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	760	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	35	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	102%	76-114%
Toluene-d8	105%	88-110%
4-Bromofluorobenzene	114%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

\*: Estimated value detected below reporting limits.

Approved by: ew

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: E-3  
Date(s) Analyzed: 11/01/88

CHEMWEST I.D.: 2473-3  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	50
Bromomethane	BRL	50
Vinyl Chloride	BRL	50
Chloroethane	BRL	50
Methylene Chloride	BRL	50
Acetone	BRL	100
Carbon Disulfide	BRL	25
1,1-Dichloroethene	19*	25
1,1-Dichloroethane	37	25
1,2-Dichloroethene (total)	BRL	25
Chloroform	BRL	25
1,2-Dichloroethane	BRL	25
2-Butanone	BRL	100
1,1,1-Trichloroethane	11*	25
Carbon Tetrachloride	BRL	25
Vinyl Acetate	BRL	50
Bromodichloromethane	BRL	25
1,2-Dichloropropane	BRL	25
cis-1,3-Dichloropropene	BRL	25
Trichloroethene	190	25
Benzene	BRL	25
Dibromochloromethane	BRL	25
1,1,2-Trichloroethane	BRL	25
trans-1,3-Dichloropropene	BRL	25
Bromoform	BRL	25
4-Methyl-2-pentanone	BRL	50
2-Hexanone	BRL	50
Tetrachloroethene	81	25
1,1,2,2-Tetrachloroethane	BRL	25
Toluene	BRL	25
Chlorobenzene	BRL	25
Ethylbenzene	BRL	25
Styrene	BRL	25
Xylenes (total)	BRL	25

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	106%	76-114%
Toluene-d8	107%	88-110%
4-Bromofluorobenzene	109%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

\*: Estimated value detected below reporting limits.

Approved by: ew

CHEMWEST ANALYTICAL LABORATORIES, INC.

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: E-4  
Date(s) Analyzed: 11/01/88

CHEMWEST I.D.: 2473-4  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	50
Bromomethane	BRL	50
Vinyl Chloride	BRL	50
Chloroethane	BRL	50
Methylene Chloride	BRL	50
Acetone	BRL	100
Carbon Disulfide	BRL	25
1,1-Dichloroethene	BRL	25
1,1-Dichloroethane	BRL	25
1,2-Dichloroethene (total)	310	25
Chloroform	BRL	25
1,2-Dichloroethane	BRL	25
2-Butanone	BRL	100
1,1,1-Trichloroethane	BRL	25
Carbon Tetrachloride	BRL	25
Vinyl Acetate	BRL	50
Bromodichloromethane	BRL	25
1,2-Dichloropropane	BRL	25
cis-1,3-Dichloropropene	BRL	25
Trichloroethene	13000	25
Benzene	BRL	25
Dibromochloromethane	BRL	25
1,1,2-Trichloroethane	BRL	25
trans-1,3-Dichloropropene	BRL	25
Bromoform	BRL	25
4-Methyl-2-pentanone	BRL	50
2-Hexanone	BRL	50
Tetrachloroethene	BRL	25
1,1,2,2-Tetrachloroethane	BRL	25
Toluene	BRL	25
Chlorobenzene	BRL	25
Ethylbenzene	BRL	25
Styrene	BRL	25
Xylenes (total)	BRL	25
Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	89%	76-114%
Toluene-d8	105%	88-110%
4-Bromofluorobenzene	101%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: ew

CHEMWEST ANALYTICAL LABORATORIES, INC.

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: E-5  
Date(s) Analyzed: 11/01/88

CHEMWEST I.D.: 2473-5  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	50
Bromomethane	BRL	50
Vinyl Chloride	BRL	50
Chloroethane	BRL	50
Methylene Chloride	BRL	50
Acetone	BRL	100
Carbon Disulfide	BRL	25
1,1-Dichloroethene	77	25
1,1-Dichloroethane	120	25
1,2-Dichloroethene (total)	BRL	25
Chloroform	BRL	25
1,2-Dichloroethane	BRL	25
2-Butanone	BRL	100
1,1,1-Trichloroethane	34	25
Carbon Tetrachloride	BRL	25
Vinyl Acetate	BRL	50
Bromodichloromethane	BRL	25
1,2-Dichloropropane	BRL	25
cis-1,3-Dichloropropene	BRL	25
Trichloroethene	91	25
Benzene	BRL	25
Dibromochloromethane	BRL	25
1,1,2-Trichloroethane	BRL	25
trans-1,3-Dichloropropene	BRL	25
Bromoform	BRL	25
4-Methyl-2-pentanone	BRL	50
2-Hexanone	BRL	50
Tetrachloroethene	290	25
1,1,2,2-Tetrachloroethane	BRL	25
Toluene	BRL	25
Chlorobenzene	BRL	25
Ethylbenzene	BRL	25
Styrene	BRL	25
Xylenes (total)	BRL	25

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	84%	76-114%
Toluene-d8	93%	88-110%
4-Bromofluorobenzene	95%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

Approved by: ew

CHEMWEST ANALYTICAL LABORATORIES, INC

REV3:9.88

CHEMWEST ANALYTICAL LABORATORIES  
VOLATILE ORGANICS

Client I.D.: E-6  
Date(s) Analyzed: 11/02/88

CHEMWEST I.D.: 2473-6  
Matrix : Water

Compound	Amount Detected (ug/L)	RL (ug/L)
Chloromethane	BRL	10
Bromomethane	BRL	10
Vinyl Chloride	BRL	10
Chloroethane	BRL	10
Methylene Chloride	BRL	10
Acetone	BRL	20
Carbon Disulfide	BRL	5
1,1-Dichloroethene	4.7*	5
1,1-Dichloroethane	BRL	5
1,2-Dichloroethene (total)	BRL	5
Chloroform	BRL	5
1,2-Dichloroethane	BRL	5
2-Butanone	BRL	20
1,1,1-Trichloroethane	7	5
Carbon Tetrachloride	BRL	5
Vinyl Acetate	BRL	10
Bromodichloromethane	BRL	5
1,2-Dichloropropane	BRL	5
cis-1,3-Dichloropropene	BRL	5
Trichloroethene	BRL	5
Benzene	BRL	5
Dibromochloromethane	BRL	5
1,1,2-Trichloroethane	BRL	5
trans-1,3-Dichloropropene	BRL	5
Bromoform	BRL	5
4-Methyl-2-pentanone	BRL	10
2-Hexanone	BRL	10
Tetrachloroethene	12	5
1,1,2,2-Tetrachloroethane	BRL	5
Toluene	BRL	5
Chlorobenzene	BRL	5
Ethylbenzene	BRL	5
Styrene	BRL	5
Xylenes (total)	BRL	5

Surrogates	% Recovery	Acceptance Window
1,2-Dichloroethane-d4	79%	76-114%
Toluene-d8	93%	88-110%
4-Bromofluorobenzene	103%	86-115%

BRL: Below Reporting Limit.

RL: Reporting Limit.

\*: Estimated value detected below reporting limits.

Approved by: ew

CHEMWEST ANALYTICAL LABORATORIES, INC

REV3:9.88

2473

## CHEM WEST ANALYTICAL LABORATORIES, INC.

600 West North Market Blvd.

Sacramento, California 95834

(916) 923-0840 FAX (916) 923-1938

Order No.

Date Rec'd. 10/19/89 18:45

Compl. Date

Section KIRK POCAN

CLIENT: Levine & Fricke  
 1900 Powell Street, 12<sup>th</sup> Floor  
 Emeryville, CA 94

Project Name: HP Logue Ave.

Project No. 1036

P.O. NO.

Contact Don Bradshaw

Phone (415) 652-4500

ANALYSIS: Six water samples rec'd. under chain of custody  
 in ChemWest 40ml vqa vials in duplicate (12) & 1gt. amber  
 bottles in duplicate (12) to be analyzed for Phenols  
 (EPA Method 625) & Volatile Organics (EPA Method 624).  
 Vqa vials preserved w/ HCl.

SAMPLE ID.	DATE	TIME	ANALYSIS	MATRIX	CONTAINERS
2473-1 E-1	10/19/89	2:08	604, 624	WATER	2 - 40ml vqa vials 2 - 1gt. bottles
-2 E-2	"	2:05	" "	"	same as above
-3 E-3	"	2:00	" "	"	" "
-4 E-4	"	2:15	" "	"	" "
-5 E-5	"	1:20	" "	"	" "
-6 E-6	"	1:34	" "	"	" "

10/26/88 Per conversation w/ John Faustini of Levine & Fricke (10/26/88 @ 68:30) please put HOLD on samples for 625 (phenol) analysis only.  
 BM

**AMENDED**

10/26/88 Per conversation w/ John Faustini & Toni Weeks (10/26/88 @ 10:15) cancel 625 (phenol) analysis.  
 BM

**AMENDED**

R-1 GC/MS  
 BM

BILL MCRENCE

CHEMWEST COURIER

2473

CHEM WEST ANALYTICAL LABORATORIES INC  
 600 West North Market Blvd.  
 Sacramento, California 95834  
 (916) 923-0840 FAX (916) 923-1938

CLIENT

Order No. \_\_\_\_\_  
 Date Rec'd. 10/19/89 18:45  
 Compl. Date \_\_\_\_\_  
 Section KIRK POCAN

CLIENT: Levine & Tricker  
 1900 Powell Street, 12<sup>th</sup> Floor  
 Emeryville, CA 94

Project Name: H P Logue Ave.  
 Project No. 1036  
 P.O. NO. \_\_\_\_\_  
 Contact Don Bradshaw  
 Phone (415) 652 - 4500

ANALYSIS: Six water samples rec'd under chain of custody  
 in ChemWest 40ml vqa vials in duplicate (2) & 1gt. amber  
 bottles in duplicate (2) to be analyzed for Ethanol  
 (EPA Method 625) & Volatile Organics (EPA Method 624).  
 Vqa vials preserved w/ HCl.

SAMPLE ID.	DATE	TIME	ANALYSIS	MATRIX	CONTAINERS
2473-1 E-1	10/19/89	2:08	604, 624	WATER	2 - 40ml vqa vials 2 - 1gt. bottles
-2 E-2	"	2:05	" "	"	Same as above
-3 E-3	"	2:00	" "	"	" " "
-4 E-4	"	2:15	" "	"	" " "
-5 E-5	"	1:20	" "	"	" " "
-6 E-6	"	1:34	" "	"	" " "

10/26/89 Per conversation w/ John Faustini of Levine & Tricker (10/26/89 @ 08:30) please put HOLD on samples for 625 (phenol) analysis only.

AMENDED BM

R-1, GC/MS  
 BM<sup>c</sup>  
 BILL MCBENIE

CHEMWEST COURIER

2473

## CHEM WEST ANALYTICAL LABORATORIES, INC.

600 West North Market Blvd.

Sacramento, California 95834

(916) 923-0840 FAX (916) 923-1938

CLIENT

Order No.

Date Rec'd. 10/19/89 18:45

Compl. Date

Section : KIRK POCAN

CLIENT: Levine & Fricke  
 1900 Powell Street, 12<sup>th</sup> Floor  
 Emeryville, CA 94

Project Name: H P Logue Ave.  
 Project No. 1036  
 P.O. NO.  
 Contact Don Bradshaw  
 Phone (415) 652 - 4500

ANALYSIS: Six water samples rec'd. under chain of custody  
 in ChemWest 40ml vials in duplicate (12) & 1gt. amber  
 bottles in duplicate (12) to be analyzed for Chemicals  
 (EPA Method 625) & Volatile Organics (EPA Method 624).  
 Vials preserved w/ HCl.

SAMPLE ID.	DATE	TIME	ANALYSIS	MATRIX	CONTAINERS
2473-1 E-1	10/19/89	2:09	604, 624	WATER	2 - 40ml vials 2 - 1gt. bottles
-2 E-2	"	2:05	" "	"	SAME AS ABOVE
-3 E-3	"	2:00	" "	"	" " "
-4 E-4	"	2:15	" "	"	" " "
-5 E-5	"	1:20	" "	"	" " "
-6 E-6	"	1:34	" "	"	" " "

R-1, GC/ms  
 BMG  
 BILL MCRENCE

CHEMWEST COURIER

## CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.:	1036			Field Logbook No.:	Date: 10/19/88			Serial No.:	No. 3573	
Project Name:	Hazardous Waste			Project Location:	Moundia Hwy					
Sampler (Signature):	D. Barker			ANALYSES	HOLD			RELEASERS:	Samplers: W.P. JD	
SAMPLES	SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	REMARKS			
E-1	10/19	2:08	-	H <sub>2</sub> O	2-10	X				
E-2		2:05	-		2-vqa	X	1 rec'd w/ bubble			
E-2		2:05	-		2-10	X				
E-3		2:00	-		2-vqa	X	1 rec'd w/ bubble			
E-3		2:00	-		2-10	X				
E-4		2:15	-		2-vqa	X				
E-4		2:15	-		2-10	X				
E-5		1:20	-		2-vqa	X				
E-5		1:20	-		2-10	X				
E-6		1:34	-		2-vqa	X	2 rec'd w/ bubble			
E-6		1:34	-		2-10	X				
RELINQUISHED BY: <u>D. Barker</u> DATE: 10/19/88 TIME: 2:20 RECEIVED BY: <u>J. Smith</u> DATE: 10/19/88 TIME: 14:25 (Signature) (Signature)										
RELINQUISHED BY: <u>D. Barker</u> DATE: 10/19/88 TIME: 18:45 RECEIVED BY: <u>Bill McBence</u> DATE: 10/19/88 TIME: 18:45 (Signature) (Signature)										
RELINQUISHED BY: <u>D. Barker</u> DATE: .. TIME: .. RECEIVED BY: <u>Levine-Fricke</u> DATE: .. TIME: .. (Signature) (Signature)										
METHOD OF SHIPMENT: <u>..</u> LAB COMMENTS: Analytical Laboratory: <u>Chem West</u>										
SAMPLE COLLECTOR: <input checked="" type="checkbox"/> LEVINE-FRICKE <input type="checkbox"/> LEVINE-FRICKE 629 Oakland Avenue 4019 Westerly Place, Suite 103 (check one) Oakland, CA 94611-4567 Newport Beach, CA 92660 (415) 652-4500 (714) 955-1390										
Shipping Copy (White)		Lab Copy (Green)		File Copy (Yellow)		Field Copy (Pink)		FORM NO. 86/COC/ARF		

Hewlett Packard Corporate Environmental Laboratory  
MODIFIED EPA 601 purgeable volatile organics  
Analytical Report

Lab No: 140 Sample No: 1  
Division No: 15  
Sample Descr: METHOD BLANK  
Date Analyzed: 10/24/1988  
Units: UG/L

freon tf	<	0.5
1,1-dichloroethylene	<	0.5
methylene chloride	<	0.5
trans 1,2-dichloroethylene	<	0.5
1,1-dichloroethane	<	0.5
chloroform	<	0.5
1,1,1-trichloroethane	<	0.5
carbon tetrachloride	<	0.5
1,2-dichloroethane	<	0.5
trichloroethylene	<	0.5
1,2-dichloropropane	<	0.5
bromodichloromethane	<	0.5
cis 1,3-dichloropropene	<	0.5
trans 1,3-dichloropropene	<	0.5
1,1,2-trichloroethane	<	0.5
tetrachloroethylene	<	0.5
dibromochloromethane	<	0.5
chlorobenzene	<	0.5
bromoform	<	0.5
1,1,2,2-tetrachloroethane	<	0.5

Surrogate Percent Recoveries

bromochloromethane	100
1,4-dichlorobutane	100

'na' indicates analyte concentration not available

Sample Comments:

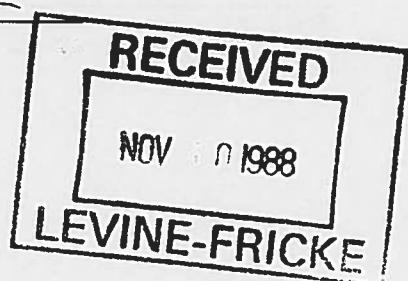
102188153306 MTV

*Eduardo*

Analyst

Reviewed by

*Eric H. Fricke*



Hewlett Packard Corporate Environmental Laboratory  
MODIFIED EPA 601 purgeable volatile organics  
Analytical Report

Lab No: 140 Sample No: 2  
Division No: 15  
Sample Descr: W13A  
Date Analyzed: 10/24/1988  
Units: UG/L

freon tf	<	50
1,1-dichloroethylene		66
methylene chloride	<	50
trans 1,2-dichloroethylene	<	50
1,1-dichloroethane		160
chloroform	<	50
1,1,1-trichloroethane	<	50
carbon tetrachloride	<	50
1,2-dichloroethane	<	50
trichloroethylene		520
1,2-dichloropropane	<	50
bromodichloromethane	<	50
cis 1,3-dichloropropene	<	50
trans 1,3-dichloropropene	<	50
1,1,2-trichloroethane	<	50
tetrachloroethylene	<	50
dibromochloromethane	<	50
chlorobenzene	<	50
bromoform	<	50
1,1,2,2-tetrachloroethane	<	50

Surrogate Percent Recoveries

bromochloromethane	100
1,4-dichlorobutane	100

'na' indicates analyte concentration not available

Sample Comments:

102188153306 MTV

*Ed Jek*

Analyst

*Ed Jek*  
Reviewed by

Hewlett Packard Corporate Environmental Laboratory  
MODIFIED EPA 601 purgeable volatile organics  
Analytical Report

Lab No: 140 Sample No: 3  
Division No: 15  
Sample Descr: W14A  
Date Analyzed: 10/24/1988  
Units: UG/L

freon tf	<	0.5
1,1-dichloroethylene		0.60
methylene chloride		0.90
trans 1,2-dichloroethylene	<	0.5
1,1-dichloroethane	<	0.5
chloroform	<	0.5
1,1,1-trichloroethane	<	0.5
carbon tetrachloride	<	0.5
1,2-dichloroethane		0.70
trichloroethylene	<	0.5
1,2-dichloropropane	<	0.5
bromodichloromethane	<	0.5
cis 1,3-dichloropropene	<	0.5
trans 1,3-dichloropropene	<	0.5
1,1,2-trichloroethane	<	0.5
tetrachloroethylene	<	0.5
dibromochloromethane	<	0.5
chlorobenzene	<	0.5
bromoform	<	0.5
1,1,2,2-tetrachloroethane	<	0.5

Surrogate Percent Recoveries

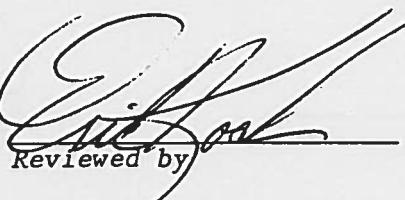
bromochloromethane	100
1,4-dichlorobutane	100

'na' indicates analyte concentration not available

Sample Comments:

102188153306 MTV

E. J. J.  
Analyst

  
Reviewed by

Hewlett Packard Corporate Environmental Laboratory  
MODIFIED EPA 601 purgeable volatile organics  
Analytical Report

Lab No: 140 Sample No: 4  
Division No: 15  
Sample Descr: W17A  
Date Analyzed: 10/24/1988  
Units: UG/L

freon tf	<	0.5
1,1-dichloroethylene		0.60
methylene chloride	<	0.5
trans 1,2-dichloroethylene		1.8
1,1-dichloroethane	<	0.5
chloroform	<	0.5
1,1,1-trichloroethane		3.2
carbon tetrachloride	<	0.5
1,2-dichloroethane	<	0.5
trichloroethylene		1.0
1,2-dichloropropane	<	0.5
bromodichloromethane	<	0.5
cis 1,3-dichloropropene	<	0.5
trans 1,3-dichloropropene	<	0.5
1,1,2-trichloroethane	<	0.5
tetrachloroethylene	<	0.5
dibromochloromethane	<	0.5
chlorobenzene	<	0.5
bromoform	<	0.5
1,1,2,2-tetrachloroethane	<	0.5

Surrogate Percent Recoveries

bromochloromethane	87
1,4-dichlorobutane	97

'na' indicates analyte concentration not available

Sample Comments:

102188153306 MTV

*E. Shue*

Analyst

*E. Shue*  
Reviewed by

Hewlett Packard Corporate Environmental Laboratory  
MODIFIED EPA 601 purgeable volatile organics  
Analytical Report

Lab No: 140 Sample No: 5  
Division No: 15  
Sample Descr: W28A  
Date Analyzed: 10/24/1988  
Units: UG/L

freon tf	<	0.5
1,1-dichloroethylene		47
methylene chloride		0.60
trans 1,2-dichloroethylene		5.0
1,1-dichloroethane		44
chloroform		4.4
1,1,1-trichloroethane		52
carbon tetrachloride	<	0.5
1,2-dichloroethane	<	0.5
trichloroethylene		73
1,2-dichloropropane	<	0.5
bromodichloromethane	<	0.5
cis 1,3-dichloropropene	<	0.5
trans 1,3-dichloropropene	<	0.5
1,1,2-trichloroethane	<	0.5
tetrachloroethylene		13
dibromochloromethane	<	0.5
chlorobenzene	<	0.5
bromoform	<	0.5
1,1,2,2-tetrachloroethane	<	0.5

Surrogate Percent Recoveries

bromochloromethane	100
1,4-dichlorobutane	100

'na' indicates analyte concentration not available

Sample Comments:

102188153306 MTV

*E. J. H.*

Analyst

Reviewed by

*E. J. H.*

Hewlett Packard Corporate Environmental Laboratory  
MODIFIED EPA 601 purgeable volatile organics  
Analytical Report

Lab No: 140 Sample No: 6  
Division No: 15  
Sample Descr: W31A  
Date Analyzed: 10/24/1988  
Units: UG/L

freon tf	<	0.5
1,1-dichloroethylene		1.4
methylene chloride	<	0.5
trans 1,2-dichloroethylene		4.4
1,1-dichloroethane		1.8
chloroform	<	0.5
1,1,1-trichloroethane		3.8
carbon tetrachloride	<	0.5
1,2-dichloroethane	<	0.5
trichloroethylene		33
1,2-dichloropropane	<	0.5
bromodichloromethane	<	0.5
cis 1,3-dichloropropene	<	0.5
trans 1,3-dichloropropene	<	0.5
1,1,2-trichloroethane	<	0.5
tetrachloroethylene		1.0
dibromochloromethane	<	0.5
chlorobenzene	<	0.5
bromoform	<	0.5
1,1,2,2-tetrachloroethane	<	0.5

Surrogate Percent Recoveries

bromochloromethane	80
1,4-dichlorobutane	87

'na' indicates analyte concentration not available

Sample Comments:

102188153306 MTV

*by M. J.*

Analyst

*E. H. J.*  
Reviewed by

Hewlett Packard Corporate Environmental Laboratory  
MODIFIED EPA 601 purgeable volatile organics  
Analytical Report

Lab No: 140 Sample No: 7  
Division No: 15  
Sample Descr: W13A DUPLICATE  
Date Analyzed: 10/24/1988  
Units: UG/L

freon tf	<	50
1,1-dichloroethylene		64
methylene chloride	<	50
trans 1,2-dichloroethylene	<	50
1,1-dichloroethane		140
chloroform	<	50
1,1,1-trichloroethane	<	50
carbon tetrachloride	<	50
1,2-dichloroethane	<	50
trichloroethylene		500
1,2-dichloropropane	<	50
bromodichloromethane	<	50
cis 1,3-dichloropropene	<	50
trans 1,3-dichloropropene	<	50
1,1,2-trichloroethane	<	50
tetrachloroethylene	<	50
dibromochloromethane	<	50
chlorobenzene	<	50
bromoform	<	50
1,1,2,2-tetrachloroethane	<	50

Surrogate Percent Recoveries

bromochloromethane	100
1,4-dichlorobutane	100

'na' indicates analyte concentration not available

Sample Comments:

102188153306 MTV

*Ed Jude*

Analyst

*E.H.J.*  
Reviewed by

**CHAIN OF CUSTODY / ALYESSES REQUEST FORM**

#10218815-204

Project No.:	1036			Field Logbook No.:	Date: 10/21/08		Serial No.:	No. 3574																																																																													
Project Name:	H-P Losue			Project Location:	Mt View																																																																																
Sampler (Signature):	Jane D. Chambers			ANALYSES	HOLD RUSH		Samplers:	JDC RWB																																																																													
<table border="1"> <thead> <tr> <th colspan="2">SAMPLES</th> <th>LAB SAMPLE NO.</th> <th>DATE</th> <th>TIME</th> <th>NO. OF SAMPLE CONTAINERS</th> <th>SAMPLE TYPE</th> <th colspan="4">REMARKS</th> </tr> </thead> <tbody> <tr><td>W13A</td><td>10/19</td><td>8:15</td><td></td><td></td><td>1</td><td>water</td><td>X</td><td></td><td></td><td></td></tr> <tr><td>W14A</td><td>10/21</td><td>12:00</td><td></td><td></td><td>"</td><td></td><td>X</td><td></td><td></td><td></td></tr> <tr><td>W17A</td><td>10/21</td><td>1:30</td><td></td><td></td><td>2</td><td>water</td><td>X</td><td></td><td></td><td></td></tr> <tr><td>W28A</td><td>10/20</td><td>8:00</td><td></td><td></td><td>"</td><td></td><td>X</td><td></td><td></td><td></td></tr> <tr><td>W31A</td><td>10/20</td><td>15:00</td><td></td><td></td><td>"</td><td></td><td>X</td><td></td><td></td><td></td></tr> <tr><td colspan="10">No Trip blank recd w/ samples. ET 10/21/08 @ 1333.</td></tr> </tbody> </table>										SAMPLES		LAB SAMPLE NO.	DATE	TIME	NO. OF SAMPLE CONTAINERS	SAMPLE TYPE	REMARKS				W13A	10/19	8:15			1	water	X				W14A	10/21	12:00			"		X				W17A	10/21	1:30			2	water	X				W28A	10/20	8:00			"		X				W31A	10/20	15:00			"		X				No Trip blank recd w/ samples. ET 10/21/08 @ 1333.									
SAMPLES		LAB SAMPLE NO.	DATE	TIME	NO. OF SAMPLE CONTAINERS	SAMPLE TYPE	REMARKS																																																																														
W13A	10/19	8:15			1	water	X																																																																														
W14A	10/21	12:00			"		X																																																																														
W17A	10/21	1:30			2	water	X																																																																														
W28A	10/20	8:00			"		X																																																																														
W31A	10/20	15:00			"		X																																																																														
No Trip blank recd w/ samples. ET 10/21/08 @ 1333.																																																																																					
RELINQUISHED BY: (Signature)	Jane Chambers			DATE 10/21/08	TIME 13:15	RECEIVED BY: (Signature)	Eland Jhee 10/21/08 13:33																																																																														
RELINQUISHED BY: (Signature)				DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME																																																																													
RELINQUISHED BY: (Signature)				DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME																																																																													
METHOD OF SHIPMENT:				DATE	TIME	LAB COMMENTS:																																																																															
SAMPLE COLLECTOR: <small>check one</small> Levine • FRICKE Emeryville	<input checked="" type="checkbox"/> LEVINE • FRICKE <input type="checkbox"/> FRIEZE <input type="checkbox"/> RYAN <input type="checkbox"/> TAYLOR			<input type="checkbox"/> LEVINE • FRICKE <input type="checkbox"/> FRIEZE <input type="checkbox"/> RYAN <input type="checkbox"/> TAYLOR				Analytical Laboratory: H-P Corp Lab 1501 Page Mill Rd Palo Alto CA 94303-2074 (415) 652-4500																																																																													
FORM NO. 86/COC/ARE																																																																																					